Model FFT 512/S Schematics

WAVETEK®

Wavetek Scientific, Inc.
10 Volvo Drive
Rockleigh, NJ 07647
(201) 767-7900

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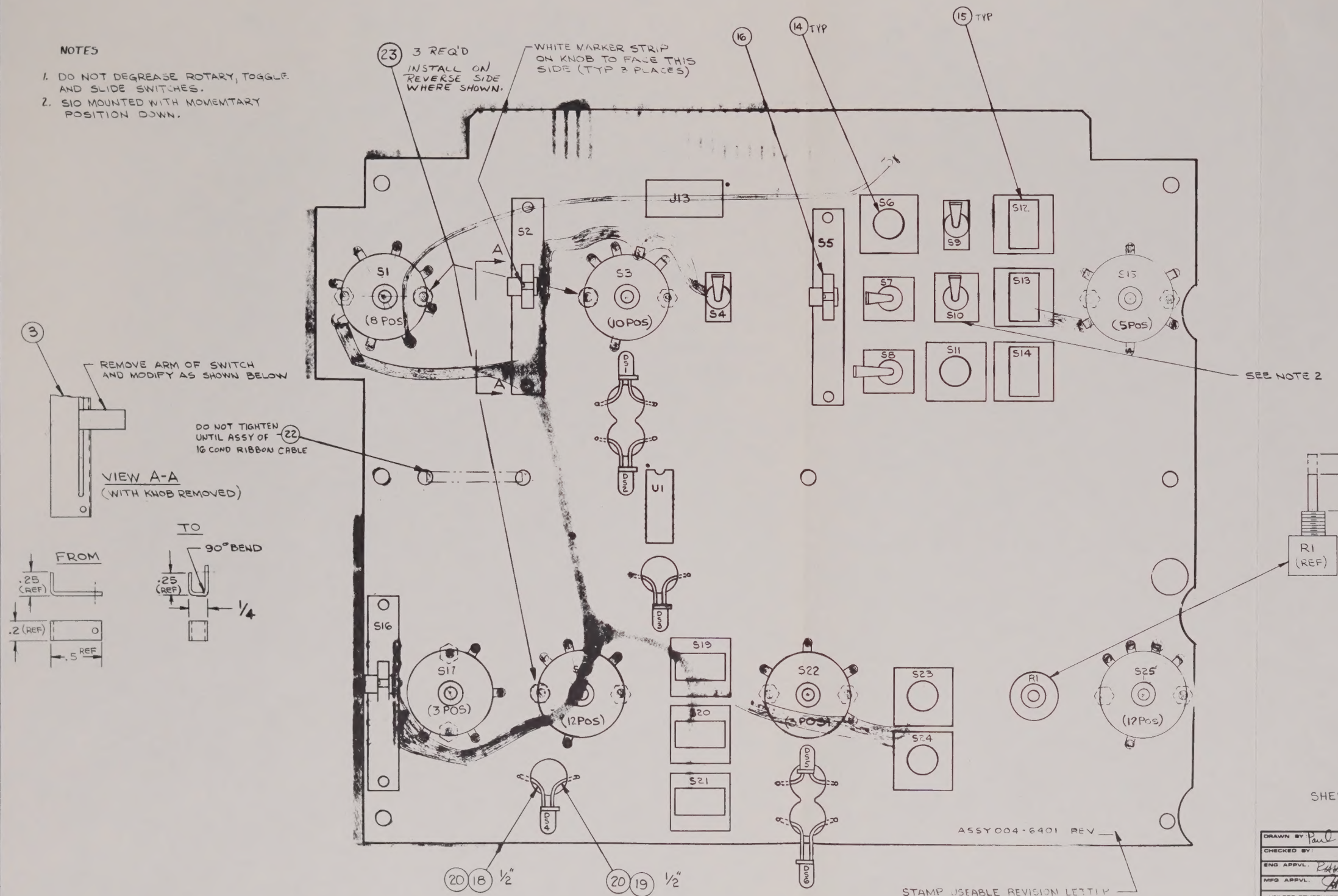
LTR	ECO NO.	CHANGED BY	APPVD BY	DATE
A	RELEASED			10-3-76
B	425	Paul 2/76		2-19-76
C	376	TC 6/76		
D	655	WNT 10/1/76		10/6/76
E	696 A	WNT 12/17/76		1/3/77
F	[illegible]	[illegible] 3-7-77		3/10/77
G	805	JA 6-3-77		6/14/77
H	897	1-26-78		1/30/78
J	1152	TC 12-15-80		1/11/82

NOTES

1. DO NOT DEGREASE ROTARY, TOGGLE AND SLIDE SWITCHES.
2. S10 MOUNTED WITH MOMENTARY POSITION DOWN.



SHEETS 2 AND 3 ARE "A" SIZE, LM

DRAWN BY Paul	DATE 5/75	WAVETEK
CHECKED BY:		Wavetek Scientific, Inc.
ENG APPVL: Robert	1/16/76	10 Volvo Drive
MFG APPVL: [illegible]	1-13-76	Rockleigh, NJ 07647

UNLESS OTHERWISE SPECIFIED ALL DIMENSIONS ARE IN INCHES AFTER FINISHING AND TOLERANCES ARE:
.XXX ±
.XX ±
X/X ± 1/64
∠° ± 1°

TITLE: ASSEMBLY FRONT PANEL PCB

SIZE D | DRAWING NO 02 004-6401 | J

SCALE 2/1 | SHEET 1 OF 3

WAVETEK®

TITLE: ASSEMBLY
FRONT PANEL PCB

LIST OF MATERIAL: 02 004-6401 J

RELEASE AUTHORITY | CHK BY | ASSY SIZE: D | DATE: 1/76 | SHEET 2 OF 3

ITEM	PART NO	QTY	DESCRIPTION	REFERENCE
1	01-320-6401	1	PC BOARD, FRONT PANEL	(3 SHEETS)
2	343-1080	1	SWITCH, ROTARY, 45°, 8 POSITION	S1
3	342-1600	3	SWITCH, SLIDE, 1 POLE, 6 POSITION	S2, S5, S16
4	345-1121	2	SWITCH, ROTARY, 30°, 12 POSITION	S25, S18
5	340-1202	2	SWITCH, TOGGLE, SPDT, ON-ON	S4, S9
6	341-1102	10	SWITCH, PUSHBUTTON, MOM	S6, S11, S12, S13, S14, S19, S20, S21, S23, S24
7	340-2202	1	SWITCH, TOGGLE, MOM-OFF-MOM	S7,
8	340-2203	1	SWITCH, TOGGLE, MOM-OFF-ON	S10
9	343-1030	2	SWITCH, ROTARY, 60°, 3 POSITION	S17, S22
10	171-1601	6	LED, RED	DS1 — DS6
11	118-2257	1	RESISTOR, VARI, 2.5K, 1/2W, 10%	R1
12	128-1150	1	PULL UP NET, 150Ω x 13	U1
13	353-1604	1	SOCKET, IC, 16 PIN	J13
13A	368-5002	1	INSULATOR	
14	370-0719	4	KNOB, ROUND, PB	
15	370-0721	6	KNOB, RECTANGULAR, PB	
16	370-0723	3	KNOB, LEVER	
17				

FORM NO 304

WAVETEK®

TITLE: ASSEMBLY FRONT PANEL PCB

LIST OF MATERIAL: 02 004-6401 J

RELEASE AUTHORITY | CHK BY | ENG | ASSY SIZE: D | DATE: 1/76 | SHEET 3 OF 3

ITEM	PART NO	QTY	DESCRIPTION	REMARKS
18	378-1704	A/R	24 GA. WIRE, BLACK	
19	378-1724	A/R	24 GA. WIRE, RED	
20	378-5221	A/R	SLEEVING	
21				
22	377-4001	1	CABLE TIE	
23	349-2010	3	SPACER: SWITCH, NY, 1/16.	FOR S1, S3, & S18
24	345-1102	1	SWITCH, ROTARY, 30°, 10 POSITION	S3
25	343-1050	1	SWITCH, ROTARY, 60°, 5 POSITION	S15
26	340-2204	1	SWITCH, TOGGLE MON-OFF-MON	S8 LONG HANDLE
	03-004-6401	REF	SCHEMATIC, FRONT PANEL PCB	

LTR	ECO NO.	CHANGED BY	APPV'D BY	DATE
A	RELEASED			1-16-76
B	423	DWS 2/76		2/20/76
C	534	DWS 5/76		5/10/76
D	576	TH 6/25		6/28/76
E	602	MST 7/76		9/1/76
F	636A	MST 12/17/76		12/29/76

EDGE CONNECTOR P.N. NUMBERS

| | | |

LTR	REVISED	APPVD	DATE
A	RELEASED		
B	780		
C	28		
D	937		
E	114		
F	1160		

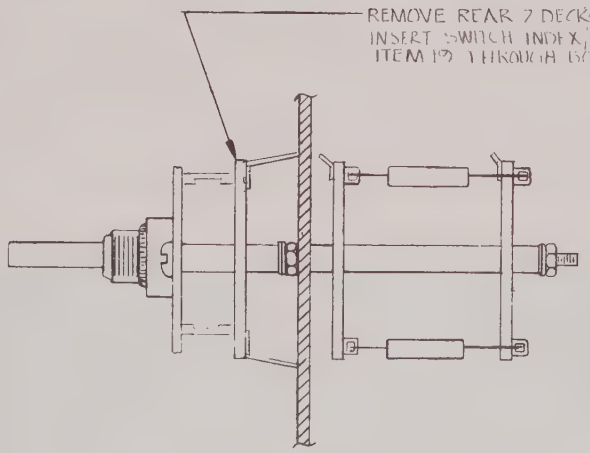
DIG GND
X
TPI
27 TYP 6 PLACES
29 TYP 5 PLACES
O/L
LO +5
31
11
23
SLEEVE EXPOSED LEAD WITH ITEM 33 (5 PLACES)
33 29
33 31
DS8
DS9
DS10
0.7" RED
S26
J54
C1
S27
S28
S29
5.0 IN
TO J15 CENTER CONDUCTOR
7
1
ROCKLAND

REMOVE ARM OF SWITCH AND MODIFY AS SHOWN BELOW

CUT OFF MOUNTING TABS, BOTH ENDS ON SWITCH S26

FROM
TO
90° BEND
.25 REF
.25 REF
1/4
.2 REF
.5 REF

REMOVE REAR 2 DECKS & SPACERS FROM ITEM 29 (S-28)
INSERT SWITCH INDEX, FRONT WAFER ASSY 01
ITEM 29 THROUGH BOARD & REASSEMBLE AS SHOWN.



S28 SIDE VIEW

SHEET 2 IS "A" SIZE L/M
COMPONENT SIDE

WNT 1-13-81

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Rockleigh, NJ 07647

ASSY FRONT PANEL PCB
512/S SERIES III

C 02 004-6403 G

WAVETEK®

TITLE: ASSY FRONT PANEL PCB
512/S SERIES III

RELEASE AUTHORITY | CHK BY | MFG | ASSY SIZE

LIST OF MATERIAL: 02 004-6403 G

DATE 3-3-77 | SHT 2 OF 2

ITEM	PART NO	QTY	DESCRIPTION	
1	01-320-6402	1	PC: FRONT PANEL PCB	
2				
3	104-5100	1	C: FX POLYCARB, 1.0uf, 1%, 100V	C1
4				
5	132-0277	1	CR: GER 120 PIV 100ma (IN277)	CR1
6	116-1151	1	R: FX COMP, 150Ω, 5%, 1/4W	R5
7	370-0723	1	KNOB, POINTER BLACK	
8				
9				
10				
11	353-1604	1	SOCKET: IC 16 PIN DIP ST	J54, (J54 MOUNTED ON SOLDER SIDE
12				
13	171-1601	3	LED: RED	DS8, DS9, DS10
14				
15	345-1121	1	SWITCH: ROTARY, 30°, 12 POS.	S29
16				
17	345-1091	1	SWITCH: ROTARY, 30°, 9 POS.	S27
18				
19	02-008-6401	1	SW ASS'Y: LPF SENS 512/S	S28
20				
21				
22				
23				
24				
25	342-2300	1	SWITCH: SLIDE, 2POLE, 3POS	S26
26				
27	353-0106	6	SOCKET: CRIMP, FEMALE	
28				
29	378-1704	33IN	24 GA WIRE BLACK	
30				
31	378-1724	7IN	24 GA WIRE RED	
32				
33	378-5181	4.5IN	SLEEVING PLASTIC FIBERGLASS 18 AWG	

C	03-004-6403	D

LTR	ECO NO.	CHANGED BY	APPV'D BY	DATE
A	RELEASED			
B	[illegible]	SA	[illegible]	[illegible]
C	1100	FT	[illegible]	8-86
D	1160	[illegible]	[illegible]	[illegible]

+5V

+5V

DS8 LOW

O/L

DS9 OVERLOAD

LO

EXT. SAMPLING DS 10

R5 150Ω

J54-4

INPUT J15

TP1

C/C J15

S 26

C1 1.0 Uf ±1%

J54-2

X

J54-3

CR1 IN 277

DIG/GND

J55-15

WIPER DECK 3 PIN 1

ANALOGUE GND

S38

WIPER DECK 2 PIN 1

R1 1K .10db

R2 1.13K 1db

R3 1.33K 2db

R4 1.5K 3db

R5 1.69K 4db

R6 1.99K 5db

R7 2.21K 6db

R8 2.67K 7db

R9 3.09K 8db

R10 3.57K 9db

R11 4.22K 10db

J 54 (16 PIN DIP)

J54-14 J54-15 J54-1 J54-16 J54-13

S27

COARSE SENSITIVITY

J54-1 J54-10 J54-11 J54-12 J54-9

S28

J54-6 J54-7 J54-1 J54-8 J54-5

S29

ANALYSIS RANGE

DRAWN BY	T.H.	DATE 1/18/77
CHECKED BY:		
ENG APPVL.		
MFG APPVL.		

UNLESS OTHERWISE SPECIFIED ALL DIMENSIONS ARE IN INCHES AFTER FINISHING AND TOLERANCES ARE:

.XXX ±
.XX ±
X/x ± 1/64
∠° ± 1°

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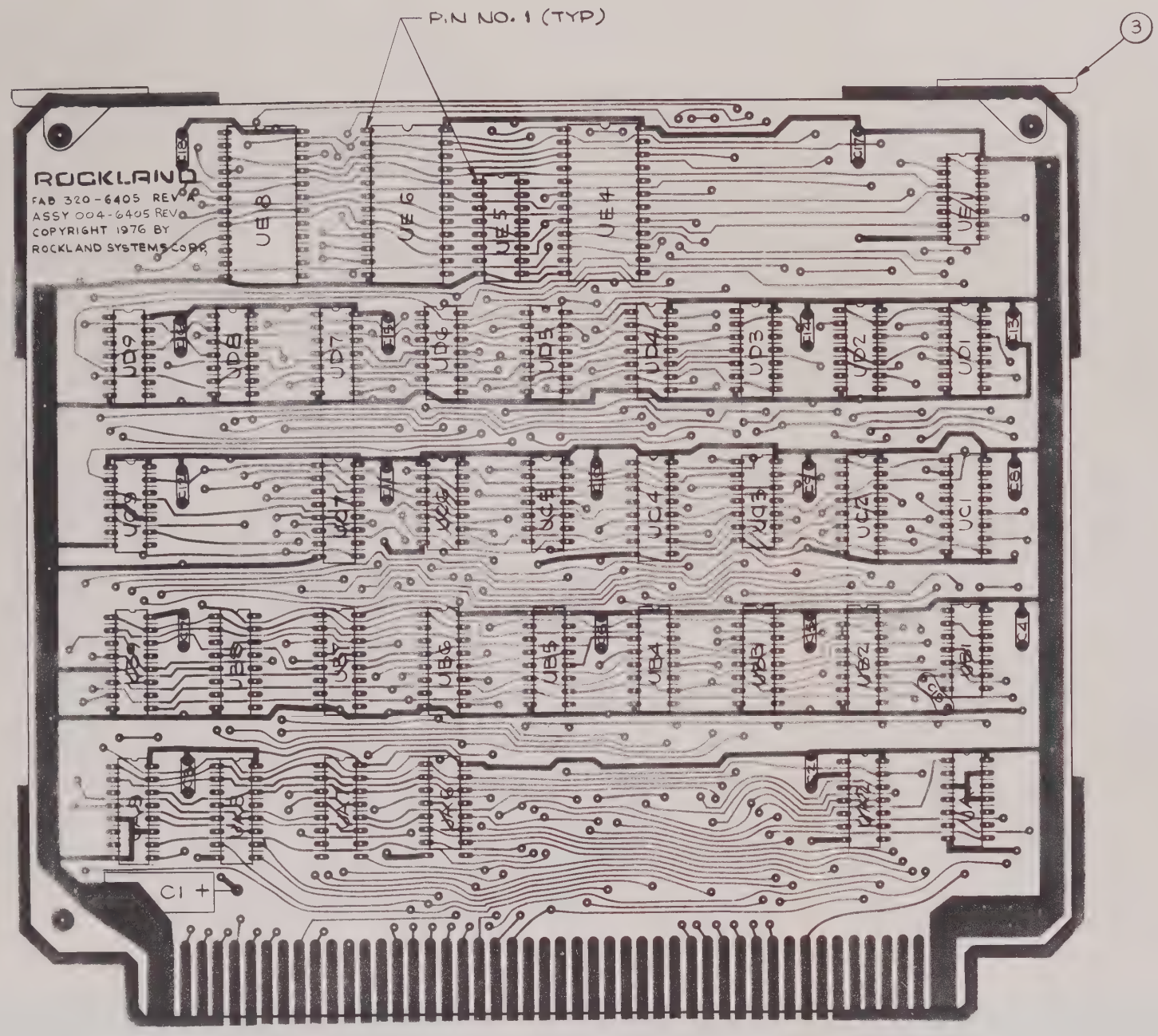
10 Volvo Drive
Rockleigh, NJ 07647

TITLE SCHEMATIC
FRONT PANEL P.C.B.

SIZE	DRAWING NO.	REV
C	03 004-640	D

SCALE ~ SHEET 1 OF 1

LTR	ECO NO.	CHANGED BY	APPV'D BY	DATE
A	RELEASED			10/23/76
B	864	Paul 10/77		11-11-77
C	934	Y.H. 6/78		7/19/78
D	987	M. McMinn		12/4/78



SHEETS 2 AND 3 ARE "A" SIZE L/M

COMPONENT SIDE

DRAWN	C.S. SALES	9/76
CHECKED BY		
ENG APPVL		10/29/76
MFG APPVL	RM	11/1/76

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.XXX ±
.XX ±
X/x ± 1/64
∠° ± 1°

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TITLE
ASSEMBLY
MULTIPLIER P.C.B.

SIZE D | DRAWING NO 02 004-6405 | REV D
SCALE 2/1 | SHEET

WAVETEK®

TITLE: ASSEMBLY MULTIPLIER P.C.B.

02 004-6405 D

RELEASE AUTHORITY | CHK BY | APP'D | REV D | DATE 10/76 | 2 | 3

ITEM	PART NO.	QTY	DESCRIPTION		
1	01-320-6405	1	MULTIPLIER PRINTED CIRCUIT BOARD		
2					
3	364-0401	2	CARD EJECTOR & PIN		
4					
5	101-1150	1	CAP MICA 150 PF 500V		C19
6					
7	100-4102	17	CAP FX CER .1uF 20% 50V		C2-C18
8					
9	109-6470	1	CAP FX ELECT 47uf 40-63V		C1
10					
11					
12					
13	124-0123	1	U: DEC/BIN CNT	82S91	UA1
14					
15	124-7474	2	U: DL D FLIP FLOP	74S74	UA2, UC9
16					
17	124-0125	8	U: DL 4:1 MPLXR	74S253	UA6, UA7, UA8, UA9, UB6, UB7, UB8, UB9
18					
19	124-0106	4	U: 4 BT SHIFT REG	74S195	UB2, UB3, UB4, UB5
20					
21	124-0109	4	U: HX D FLIP FLOP	74S174	UC1, UC2, UC4, UC7
22					
23	124-7486	1	U: QD 2 IN XOR GATE	74S86	UC3
24					
25	124-7400	3	U: QD 2 IN NAND GATE	74S00	UC5, UD3, UD8
26					
27	122-7474	1	U: DL D FLIP FLOP	7474	UC6
28					
29	124-7440	2	U: DL 4 IN NAND BUFF	74S40	UB1, UD7
30					
31	124-7408	4	U: QD 2 IN AND GATE	74S08	UD1, UD2, UD4, UE1
32					
33	124-7404	2	U: HEX INVERTER	74S04	UD5, UD6

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TITLE: ASSEMBLY MULTIPLIER P.C.B

LIST OF MATERIAL: 02 004-6405 | REV: D

RELEASE AUTHORITY | CHK BY | MFG | ASSY SIZE: D | DATE: 10/76 | SHT 3 OF 3

ITEM	PART NO	QTY	DESCRIPTION	REMARKS
34	124-7402	1	U: QD 2 IN NOR GATE 74S02	UD9
35				
36	124-0103	3	U: 4 BIT ALU 74S181	UE4, UE6, UE8
37				
38	124-0104	1	U: LK AHD CRY GEN 74S182	UE5
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FORM NO 994

LTR	ECO NO.	DESCRIPTION BY	APPROVED	DATE
A				
B	864	Ed Flynn		
C	957	M. McMinn		

X-67 MULDONE
X-70 MUL
X-75
X-77 MCLK
X-69 GGATE
X-31 A0
X-46 A15
X-45 A14
X-44 A13
X-43 A12
X-42 A11
X-41 A10
X-40 A9
X-39 A8
X-38 A7
X-37 A6
X-36 A4
X-35 A3
X-34
X-33 A2
X-32 A1
X-81 GCLR
X-97,98,99,100
X-1,2,3,4
C1 +47uF C2 .1uF C3 THRU C18 .1uF DISC TYP 17 PLACES
VCC(+5V) BUS
GND BUS
74S02
S00
S04
S08
S86
S40
S02
+5V
GCLK
DCLK
SIGN
CONV
RESTORE
INIT
C19 150pF
REG G
REG D
MUX G
MUXGA X-71
X-74 ENG
X-73 MUXGB
X-5 X-6 X-7 X-8 X-9 X-10 X-11 X-12 X-13 X-14 X-15 X-16 X-19 X-20 X-21 X-22

DRAWN BY:		DATE	6/76
CHECKED BY:			
ENG APPVL:			10/2/76
MFG APPVL:	1284		11/1/76

UNLESS OTHERWISE SPECIFIED ALL DIMENSIONS ARE IN INCHES AFTER FINISHING AND TOLERANCES ARE:
.XXX ±
.XX ±
X/X ± 1/64
∠° ± 1°

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10 Volvo Drive
Rockleigh, NJ 07647

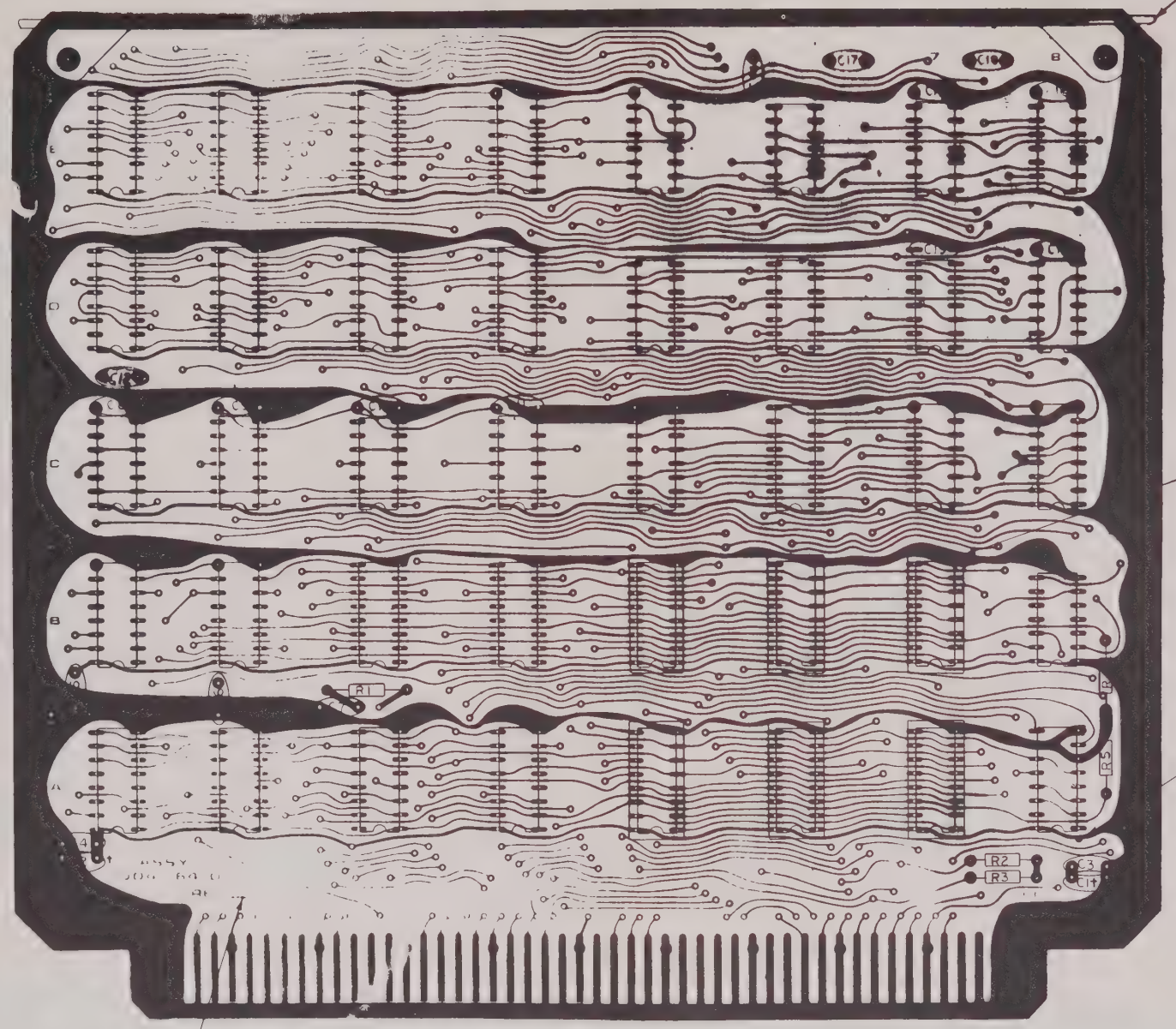
TITLE
SCHEMATIC - MULTIPLER

SIZE D | DRAWING NO. 03 004-6405 | C

SCALE ~ | SHEET / OF /

03 004-6405

LTR	ECO NO.	CHANGED BY	APPV'D BY	DATE
A	RELEASE			1-22-76
B	407			9-24-76
C	650	WNT		9-24-76
D	860	Paul 10/24/77		10-28-77
E	934	— 1/78		2/19/78



13 TYP
2 REQUIRED

14 36

INDICATES PIN 1 (TYP)

NOTES:
1. STAMP USEABLE REV LETTER PER INK SPEC. DWG. NO. 00-995-0001.
2. SHEETS 2 & 3 ARE "A" SIZE (L/M)

FOR C19, R4 & R5 REV B AND HIGHER ARTWORK ONLY

WNT 9-21-76

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Wavetek Scientific, Inc.
10 Volvo Drive
Rockleigh, NJ 07647

ASSEMBLY
ALU P.C. BOARD

02 - 004-64.0 E

WAVETEK®

TITLE: ASSEMBLY A.L.U. BOARD (5125)

02-004-6110 E

DATE 1-12-76

ITEM	PART NO.	QTY	DESCRIPTION	
1	01-320-6410	1	BOARD P.C.	
2				
3				
4				
5				
6	00-116-2331	3	R: FXD COMP 3.3K 1/4W ±5%	R1, R2, R3
7	00-116-2101	2	R: FXD COMP 1.0K 1/4W ±5%	R4, R5
8				
9				
10	00-109-6100	2	C: FXD TANT 1.0uf 20% 20V	C1, C2
11	00-100-4102	17	C: FXD CER .1uf ±20% 50V	C3 THRU C19
12				
13	00-364-0401	2	EJECTOR	
14	00-353-1604	6	SOCKET I.C. (16 PIN)	USED WITH UA5, UA6, UA7, UB5, UB6, UB7
15	368-5002	6	INSULATOR	
16				
17	00-124-7400	1	U: 74S00	UE8
18	00-125-7400	1	U: 74LS00	UE7
19	00-124-7404	1	U: 74S04	UE6
20	00-124-7408	1	U: 74S08	UB8
21	00-124-7410	1	U: 74S10	UD5
22	00-124-7440	1	U: 74S40	UD8
23	00-124-7451	1	U: 74S51	UD6
24	00-124-7474	1	U: 74S74	UD7
25	00-125-7486	4	U: 74LS86	UC1, UC2, UC3, UC4
26	00-125-0121	2	U: 74LS191	UC5, UC6
27	00-124-0122	12	U: 74S194	UE1-UE4, UD1-UD4, UA1-UA4
28	00-124-0125	1	U: 74S253	UE5
29	00-124-0126	1	U: 74S257	UA8
30	00-125-0130	4	U: 74LS283	UB1, UB2, UB3, UB4
31	00-021-7063	1	U: PROM PGMD 129-3008 UA5	REV A
32	00-021-7064	1	U: PROM PGMD 129-3008 UA6	REV A
33	00-021-7065	1	U: PROM PGMD 129-3008 UA7	REV A

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TITLE: ASSEMBLY
ALU BOARD (5123)

02-004-6410 E

RELEASE AUTHORITY | DRAWN BY | CHK'D BY | APP'D BY | SIZE A | DATE 1-12-76

ITEM	PART NO.	QTY	DESCRIPTION	
34	00-021-5003	1	U: PROM PGMD 129-3004 UB5	REV B
35	00-021-5004	1	U: PROM PGMD 129-3004 UB6	REV B
36	00-021-5005	1	U: PROM PGMD 129-3004 UB7	REV B
37				
38	122-0131	2	U: HEX 3 STATE BUS BUFFER 74367	UC7, UC8
39				
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65				
66				

SIZE D	DWG NO 03-004-6410	REV B	

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10 Volvo Drive
Rockleigh, NJ 07647

TITLE: LOGIC DIAGRAM
ALU P.C.BOARD (5125)

DRAWN BY		DATE 4/7/76
CHECKED BY		
ENG APPVL		
MFG APPVL		

UNLESS OTHERWISE SPECIFIED
ALL DIMENSIONS ARE IN INCHES AFTER FINISHING AND TOLERANCES ARE:
.XXX ±
.XX ±
X/X ± 1/64
∠° ± 1°

SIZE C | DRAWING NO. 03-004-6410 | REV B
SCALE ~ | SHEET 1 OF 1

LTR	ECO NO.	CHANGED BY	APPVD BY	DATE
A	RELEASED			
B	6550			

ECO	Rev	Date
482	H	3-19-76
504	G	4-1-76
544	J	5/20/76
555	K	6/8/76
855	M	10/28/77
875	REVISED	11/11/77
934	N	7/19/78
987	P	12/4/78
1841	eca	6/28/84

FABRICATION INSTRUCTIONS

ASSEMBLY # 02-004-6416 REV K

PROGRAM CONTROL

Part Quant.

1) USE One BOARD, # 320-6498

2) INSTALL WIRE WRAP POSTS AT:

a) CONNECTOR TABS: ALL 100 PINS — 100

b) Vcc BUSS: B1-B14, D1-D14, All of Row F — 42

c) GROUND PLANE: A1-A14, C1-C14, E1-E14, Top Row F3-F12 — 52

d) IC PIN LOCATIONS: NONE

3) INSTALL PUSH-IN PIN SOCKETS AT IC PIN LOCATIONS:

a) NONE

4) INSTALL IC SOCKETS AT LOCATIONS:

a) 14. { A1-A14, B1, B2, B4-B6, B10-B14, B3, C1, C2, C4, C6, C13, C14, D1, D2, D12, E2, E10, E12, E14, F3, F12 } — 40

16 { B7-B9, C3, C5, C7-C12, D3-D11, D13, D14, E3, E5-E9, E11, E13, F4, F5, F6, F7, F8, F10 } — 37

5) OTHER: Install .1 uf bypass caps at all — 24
available locations. Install 47 uf cap — 1
as shown. — 14

WAVETEK®

ASSY 02-004-6416 REV K

DESCRIPTION PROGRAM CONTROL

WAVETEK

TITLE: PROGRAM CONTROL

LIST OF MATERIAL: 02 004-6416 REV K

RELEASE AUTHORITY | CHK BY | ENG | MFG | ASSY SIZE: A | DATE: 3-10-76 | SHEET 3 OF 4

ITEM	PART NO	QTY	DESCRIPTION	REMARKS
1	124-0126	2	74S257	
2	124-0127	3	74S258	
3	129-0001	3	74S189	
4	122-2475	3	7475	
5	124-0109	3	74S174	
6	124-7400	6	74S00	
7	124-7410	5	74S10	
8	124-7404	6	74S04	
9	124-0130	2	74S283	
10	124-0131	2	74367	
11	122-0132	1	74368	
12	125-0124	1	74LS251	
13	122-0120	1	74173	
14	125-0130	3	74LS283	
15	124-0114	1	74S134	
16	122-2474	2	7474	
17	124-7408	3	74S08	
18	124-7411	2	74S11	
19	124-7432	2	74S32	
20	124-7402	1	74S02	
21	124-0124	1	74S251	
22	125-7451	1	74LS51	
23				
24	124-0115	5	74S138	
25	124-1405	4	74S05	
26	124-7430	2	74S30	
27	122-7440	2	74S40	
28	125-0121	2	74LS191	
29	125-0151	3	74S51	
30	128-2151	1	Pullup Net 15 x 1.5K	
31	128-1471	1	Pullup Net 15 x 470Ω	

WAVETEK®

TITLE: PROGRAM CONTROL

LIST OF MATERIAL: 02 004-6416 J

RELEASE AUTHORITY | CHK BY | DWG | ASSY SIZE: A | DATE: 3-10-76 | SHEET 4 OF 4

	PART NO	QTY	DESCRIPTION	REMARKS
32	353-1602	37	Socket: 16 pin	
33	353-1402	40	Socket: 14 pin	
34	100-4102	24	C: FXD CER .1uf ±20% 50V	
35	300-6448	1	PC Board	
36	353-1003	192	Conn. WW post .025 sq	
37	364-0401	2	Card guides + pins	
38	109-6470	1	C: Elect 47uf 40-63V	
39	021-0009	1	C10-6416-129-3001-PROGRAM	IM5610
40	021-0010	1	D10-6416-129-3001-PROGRAM	IM5610
41	124-7474	1	U: DUAL D-TYPE FLIP FLOP (74S74)	

61

'0E

LADCEN → X-71

DYNJP ← X-73

74S138 C5 — 74S10 A13 — 74S04 A3 — GO

74S138 C7 — 74S04 A3 — TRIGEN ← X-95 — ENCTRA ← X-89

74S138 C8 — +5V

74S138 C9 — DCDEN1 — DCDEN2 — DCDEN3 (C14, 74S04)

I4 I1 I2 I3 I0 I5 I6 I7 I8 I9 I10 I11

X-47 X-48 X-49 X-50 X-51 X-52 X-53 X-54 X-55 X-56 X-57 X-58

74S00 A8 — 74S10 A1 — 74S74 B3 — PAGE2 → X-69

74S00 A8 — 74S10 A1 — 74S74 B3 — ADCR

JMP — JSR1 — JSR0 — WMUL — WEXT — END — JSR2

74S10 A13 — 74S08 AH — JSR (SH2) — LDC

74S11 B5

74S51 E10 — VCC — HO

74S11 B5 — I8 I7 I6

74S00 A8 — JSR2

ACLK — 74S04 A2 — ACLK → TO B7-9

74S174 B8 — JSR — END

74S174 B8 — CLEAR — +5

74S32 B6 — HO G1

XFRLOG — XPD1

74S174 B8 — XPD2

74S04 A2 — WEXT

74S04 A3 — WMUL

74S00 A7 — MULDONE

74S174 B7 — +5V — 470Ω E13-2 — +5

74S00 A7 — EXTREL

74S00 A7 — WAIT MEM

74S10 A13 — PWEN (TO SH 3)

74S00 A7 — 74S10 EH

74S74 C1 — PRREQ → X-30

74S74 C1 — MSKPR → X-24

74S74 C1 — X-28

74S32 C6 — 74S04 A2 — MUXFSEL → X-96

E3 1.5K → +5 — BUTEN (TO SH 3)

E3 MSKPW → X-22

74S74 C2 — CNTGATE → X-17

74S30 C4 — DCDEN3 — DCD EN2 (FROM SHT 2)

74S174 B8 — DCDEN1

74S174 B8 — PAGE → X-80

74S00 A7 — 74S174 B8 — 74S11 B4 — 74S04 A2

74S08 AH — PECNT → X-21

74S00 A8 — SAVCLK

74S134 C3 — DONGATE → X-18

LDC DIR (FROM DIO-9)

END

+5

74S04 A3 — 74S00 A8 — 74S134 C3 — ADSEL → X-15

74S174 B7 — X 13

74S00 A7 — WSHFT — FROM SH 11-12

74S04 A2 — 74S174 B7 — (TO SHT 3 B5-13) — 74S04 A2

TENB2 — MULDONE — EXTREL — TENB1 — PREN — PWEN — KCLK

X-82 — X-5 — X-27 — X-29 — X-15

G1 X-88 — G3 X-23

WAVETEK
Wavetek Scientific, Inc.
10 Volvo Drive
Rockleigh, NJ 07647

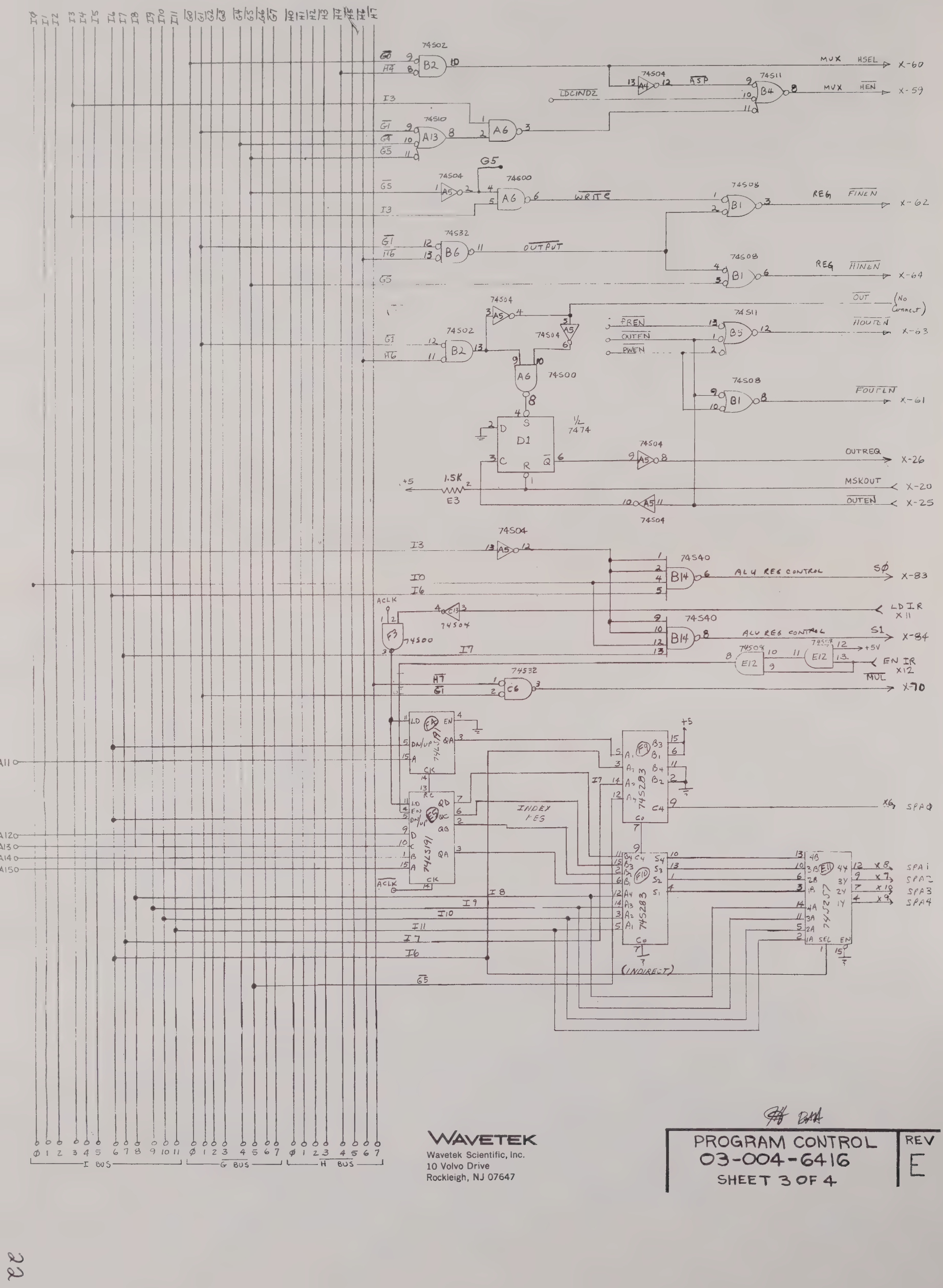
Rev	ECO	Approv	Date
B	504		9-1-76
C	544		5/20/76
D	855		10/31/77
E	893		2/10/78
F	855		6/16/87

PROGRAM CONTROL
03-004-6416
SHEET 1 OF 4

REV F

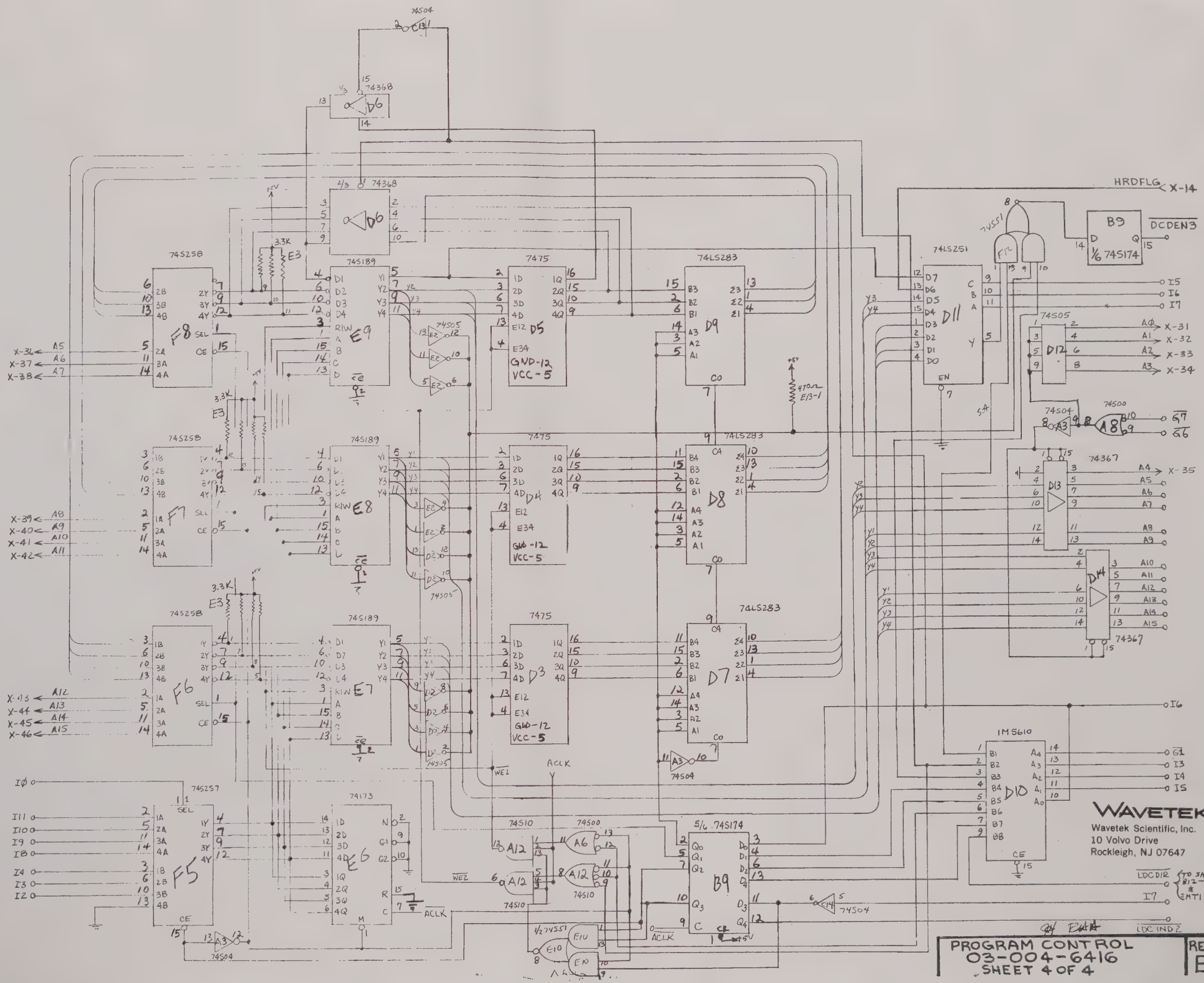
WAVETEK
Wavetek Scientific, Inc.
10 Volvo Drive
Rockleigh, NJ 07647

PROGRAM CONTROL
03-004-6416
SHEET 2 OF 4
REV F

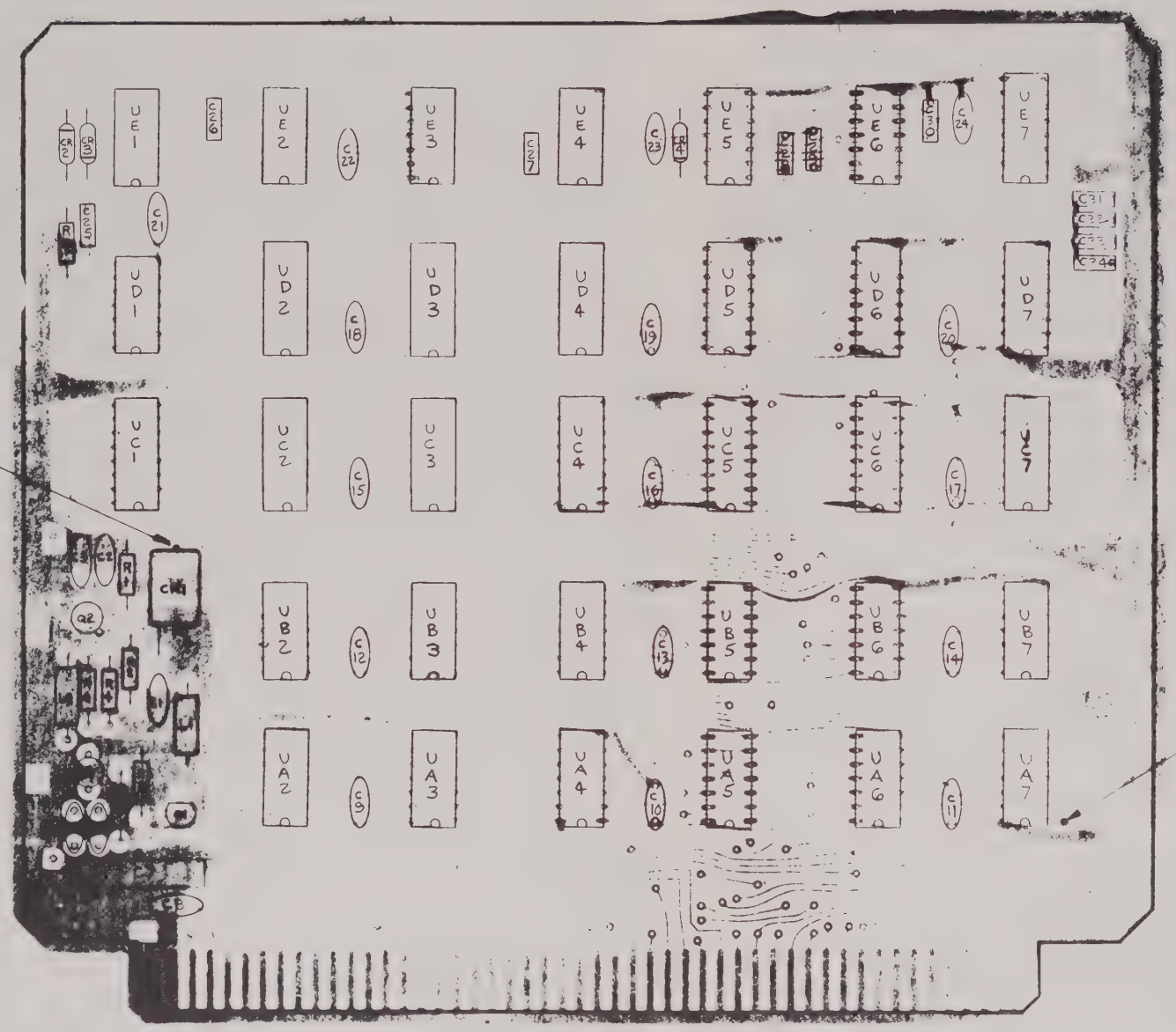


WAVETEK
Wavetek Scientific, Inc.
10 Volvo Drive
Rockleigh, NJ 07647

PROGRAM CONTROL	REV
03-004-6416	E
SHEET 3 OF 4	


74S04
74368
D6
74S258
74S189
7475
74LS283
74LS251
D11
D9
D5
F8
E9
E3
33K
3.3K
X-36 A5
X-37 A6
X-38 A7
F7
E8
D4
X-39 A8
X-40 A9
X-41 A10
X-42 A11
F6
E7
D3
X-43 A12
X-44 A13
X-45 A14
X-46 A15
D8
D7
74S257
F5
E6
74173
74S10
74S00
5/6 74S174
B9
74S51
F12
HRDFLG X-14
DCDEN3
74S05
D12
74S04
74S00
74367
D13
D14
IM5610
D10
I5
I6
I7
I6
G1
I3
I4
I5
A0 X-31
A1 X-32
A2 X-33
A3 X-34
A4 X-35
A5
A6
A7
A8
A9
A10
A11
A12
A13
A14
A15
WE1
WE2
ACLK
LDC DIR
LDC IND 2
WAVETEK
Wavetek Scientific, Inc.
10 Volvo Drive
Rockleigh, NJ 07647
PROGRAM CONTROL
03-004-6416
SHEET 4 OF 4
REV
E

A	—	RELEASE		
B	802			
C	936	TH 6/20/80		
D	987	M.McMinn		
E	1299	TC 2-12-82		



WAVETEK®

TITLE: CLOCK BD ASSY

LIST OF MATERIAL: 02 004-6420 | REV: E

RELEASE AUTHORITY | CHK'D | APP'D | MFG | ASSY SIZE: D | DATE: 2/77 | SHEET 2 OF 3

ITEM	PART NO	QTY	DESCRIPTION	REMARKS	
1	124-7400	2	U: QUAD 2-IN NAND	74S00	UA2, UB7
2	124-0115	4	U: DECODER	74S138	UD6, UD2, UD4, UD5
3	124-7408	3	U: QUAD 2-IN AND	74S08	UA3, UB5, UB6
4	124-0109	1	U: HEX D-TYPE FF	74S174	UD3
5	124-7404	3	U: HEX INV	74S04	UA4, UB4, UD1
6	122-7402	1	U: QUAD 2IN NOR	7402	UE2
7	124-7474	2	U: DUAL D TYPE FF	74S74	UB3, UB2
8	122-7474	1	U: DUAL D TYPE FF	7474	UE4,
9	122-7400	1	U: QUAD 2-IN NAND	7400	UE3
10	122-0118	3	U: 4-BIT BINARY CNTR	74161	UE7, UD7, UC2
11	122-7437	1	U: QUAN -2-IN NAND BUFFER	7437	UE5
12	128-2331	1	U: PULLUP NET 3.3K X15	R898-3.3K	UC1
13	122-7413	1	U: DUAL 4-IN NAND SCHMITT	7413	UE1
14	125-0117	1	U: 8-INPUT MUX	74LS151	UC4
15	122-7404	4	U: HEX INV	7404	UE6, UA7, UA5, UA6
16	122-0133	3	U: DUAL 4-BIT DECADE CNTR	74390	UC6, UC5, UC7
17					
18	125-0109	1	U: HEX D TYPE FF	74LS174	UC3
19	109-6470	1	C: elect fxd 47uf 40-63V		C7
20	100-4102	18	C: FXD CER .1uf ±20% 50V		C8-C24, C3
21	132-0457	2	CR: sil low leak	1N457A	CR2, CR3
22	116-0471	1	R: fxd comp 47Ω, 1/4W, 5%		R7
23	364-0401	2	EJECTOR: PC EDGE		
24					
25	100-2100	10	C: FXD CERAMIC .001μf		C25-C34
26					
27	131-9562	1	CR: SIL ZENER 5.6V 1W	1N4734A	CR4
28					
29					
30					
31	01-320-6420	1	CLOCK P.C.B.		
32					
33					

25

WAVETEK®

TITLE	LIST OF MATERIAL	
CLOCK BD. ASSY.	02 004 - 6420	E

RELEASE AUTHORITY	CHK BY	ENG	MFG	ASSY SIZE	DATE	SHEET 3	3
				D			

ITEM	PART NO	QTY	DESCRIPTION	
34				
35				
36	134 - 2222	1	Q: SIL NPN 2N2222	Q2
37				
38	162 - 3750	1	CRYSTAL: 30.72 MHZ HC-18 CASE	CR1
39				
40	101 - 1130	1	CAPACITOR, 130 pf	C1
41				
42	101 - 0220	2	CAPACITOR, 22 pf	C2, C6
43				
44	116 - 1101	1	REISISTOR, 1/4W ±5% 100Ω	R2
45				
46	108 - 0180	1	CAPACITOR, TRIMMER, 3.5-18pf	C4
47				
48	101 - 0050	1	CAPACITOR, 5 pf	C5
49				
50				
51				
52	150 - 8680	1	COIL, .68 uh	L1
53				
54	150 - 8470	1	COIL, .47 uh	L2
55				
56	135 - 6521	1	TRANSISTOR, MPS 6521	Q1
57				
58	116 - 1681	1	RESISTOR, 1/4W, ±5% 680Ω	R1
59				
60	116 - 1331	1	RESISTOR, 1/4W ±5% 330Ω	R3
61				
62	116 - 2131	1	RESISTOR, 1/4W ±5% 1.3Ω	R4
63				
64	116 - 2471	1	RESISTOR, 1/4W ±5% 4.7Ω	R5
65				
66	116 - 2101	1	RESISTOR 1/4W ±5% 1K Ω	R6

LTR	ECO NO.	CHANGED BY	APPVD BY	DATE
A	RELEASED			7/26/77
B	802	T.H 6-17-77		6/17/82
C	1299	TE 2-12-82		4/5/82

I3 I4 I5 I6 I7 I9 I10 I11 X-61 G1
(SHOWN FOR REFERENCE ONLY)

X-17 FLGEN

74S24 74S00 74S138 D5

74S04 ACLK

74S138 D4 ENR → X-59

74S133 D6 CLRA CLRB CLRC CLRE CLRG CLREP REMFLG
X-75 X-77 X-79 X-74 X-78 X-89 X-29

74S74 B3

EDP → X-67

74S138 D2 LDIR DCIRA LDSENS LDAR LDI LD2 LD3 LD4 LDA
X-60 X-88 X-91 X-93 X-24 X-26 X-28 X-30 X-86

74S174 D3 +5V VCC

74S00 B7

74LS174 +5

X-36 A9
X-35 A8
X-33 A6
X-32 A5
X-31 A4

74LS151

74161/9316 +5 MR REP CET PE TC

1.024 MHZ

10 MHZ 1/2 74390 C7

74390 C6 C5

00 MSEC 10 MSEC

1/2 74390

X-73 1.024 MHZ

74S08 B5 I11-X58 I10-X57 I9 X56 I7 X54 I6-X53 I5-X52 I4-X51 I3-X50

VCC C1 3.3K

X-72 SWEEP C2 .001

X-63 BLANK C1 .001

X-75 X-77 X-79 X-74 X-78 X-89 X-29

PLOT FF E4 7474

PLOT → X-81

7437 E5 PENLIFT → X-18

5.6 CR4 IN4734A

PWRUP X-71 A3 74S08

RUN FF E4 7474 RUN

7437 E5

X-70 STOP C1 3.3K C3 .001

X-68 RESET

7404 E6

74LS02 E2

7400 E3 PRDIS → X-65

X-62 INTSPLCLK

3.3K NETWK C1 C2 C3

X-90 PR1
X-92 PR2
X-94 PR4
X-96 PRB

74161 D7 MR CEP CET PE TC CP

10 MSEC

C5 .001 C6 .001 C7 .001 C8 .001

74LS02 E2

74C4 A7

7400 E3 PLOT CLOCK → X-69

7435 E5

7400 F3

7413 E1

X 83 TRIPLE C

X 85 FAST

EXTCLOCK R7 4.7Ω

IN457 CR3

C10 .001

CR2

74S04 TYP

ACLK → O ACLK
ACLK1 → X-76
ACLK2 → X-39 (ALU)
MCLK → X-48
ACLK5 → X-41 (MEMORY)
ACLK4 → X-42 (PSM)
ACLK6 → X-43 (SP)
ACLK7 → X-44 (VERT)
ACLK8 → X-45 (AD)
ACLK9 → X-46 (INT)

74S08 A3

74S04 D1 D1 A2 RCLK → X-84

C1 3.3K SCLK → X-6

74S08 A3

74S00 A2 CLKEN → X-8

74S74 B2 B2 B3

10 MHZ

74S00 B7 TCLK → X-64 (10.24 MHZ)

X-7 FCLKEN 3.3K C1

74S00 A2 74S00 A2

CASE GROUND CR1 30.72 MHZ +5V

C3 .1 UF C2 22PF

R1 680Ω R4 1.3K R6 1K

Q2 2N2222 L2 .47Uh C4 3.5 - 18 PF C6 22 PF

R2 100Ω C1 130 PF L1 0.68 Uh C5 5 PF

Q1 MPS6521 R5 4.7K R3 330Ω

V

DRAWN BY: L.H.	DATE 2/17/77	WAVETEK	
CHECKED BY:		Wavetek Scientific, Inc.	
ENG. APPVL:	4/4/77	10 Volvo Drive	
MFG APPVL.	4/4/77	Rockleigh, NJ 07647	

UNLESS OTHERWISE SPECIFIED ALL DIMENSIONS ARE IN INCHES AFTER FINISHING AND TOLERANCES ARE: .XXX ± .XX ± X/X ± 1/64 ∠° ± 1°

TITLE: SCHEMATIC - CLOCK

SIZE D | DRAWING NO. C3 004-6420 | REV C | SCALE ~ | SHEET | OF

C3-004-6420

LTR	ECO NO	CHANGED BY	APPV'D BY
A	RELEASE		
B	201	[illegible] 78	
C	987	M.McMINN	
D	990	[illegible]	

E4 PLATFORM

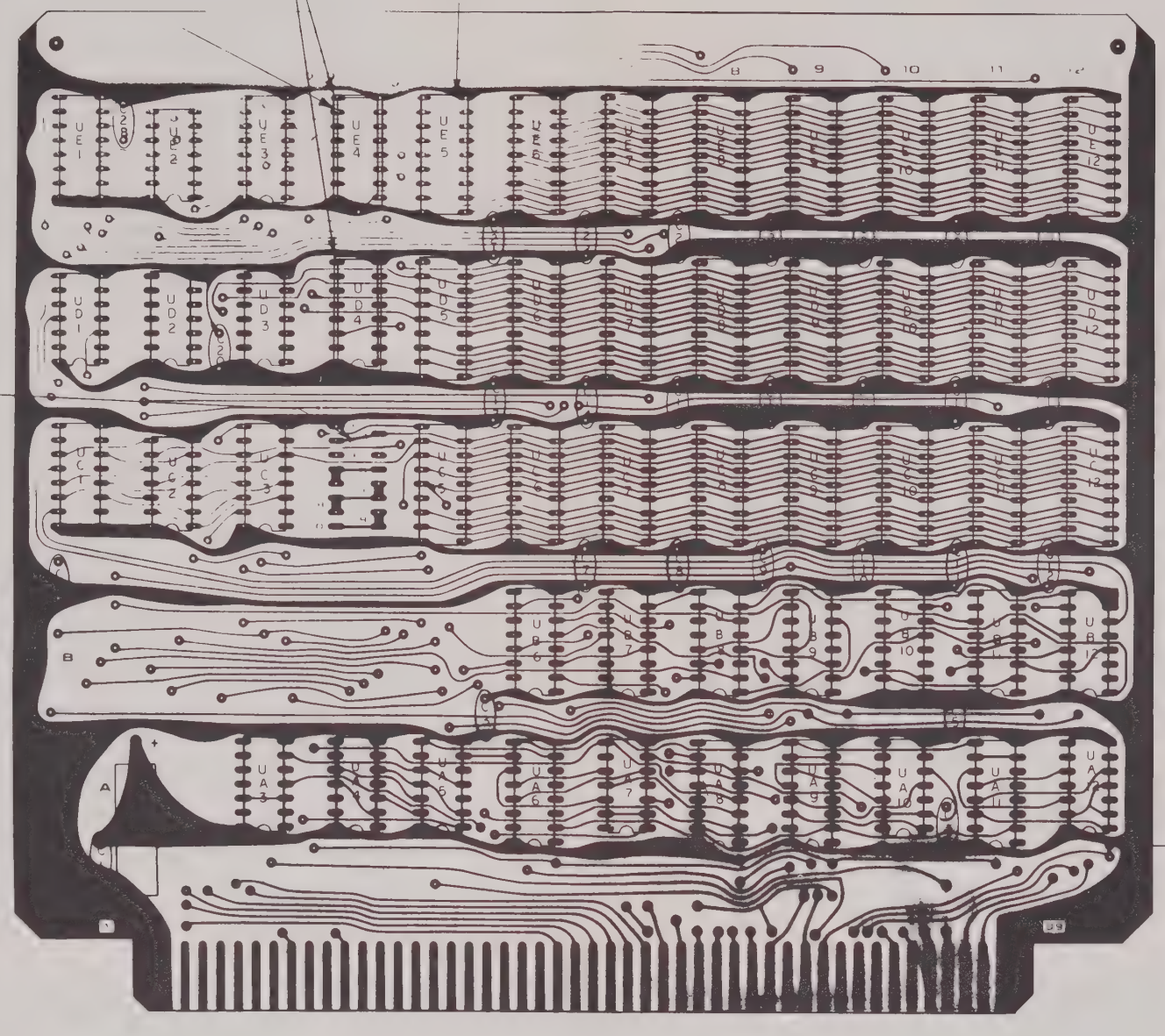
BARE WIRE (32)

SOLDER AT EACH TERMINAL

(33)

(25) (26)

(27) 24 PLACES



INSTALL JUMPERS AS REQD

1-2 6-5
8-7 10-9

INDICATES PIN 1 (TYP)

SHEET 2 OF A SIZE L/M.

DRAWN BY TH	DATE 10/10/77	WAVETEK
CHECKED BY		Wavetek Scientific, Inc 10 Volvo Drive Rockleigh, NJ 07647
ENG APPVL		
MFG APPVL		

UNLESS OTHERWISE SPECIFIED ALL DIMENSIONS ARE IN INCHES AFTER FINISHING AND TOLERANCES ARE

XXX ±
.XX ±
X/X ± 1/64
∠° ± 1°

TITLE: ASSEMBLY PROM BOARD P.C.

SIZE D | DRAWING NO 02 004-6428 | REV L

SCALE 2/1 | SHEET 1 OF 2

WAVETEK®

TITLE ASSEMBLY
PROM BOARD P.C.B.

LIST OF MATERIAL 02 004-6428 REV D

RELEASE AUTHORITY | CHK BY | MFG | ASSY SIZE D | DATE | SHEET 2 OF 2

ITEM	PART NO	QTY	DESCRIPTION	REMARKS
1	125-0109	2	U: HEX D-TYPE FF 74LS174	UA8, UB10
2				
3	01-320-6425	1	PROM P.C.B.	
4				
5	124-0115	1	U: DECODER 74S138	UD4
6				
7	124-7437	3	U: QUAD NAND BUFFER 74S37	UD1, UD2, UD3
8				
9	124-0109	4	U: HEX D-TYPE FF 74S174	UC1, UC3, UE1, UE3
10				
11	124-7432	1	U: QUAD OR 74S32	UA5
12				
13	124-0119	3	U: QUAD BINARY CNTR 74S163	UA6, UA9, UA11
14				
15	124-0126	3	U: QUAD 2-IN MUX 74S257	UB6, UB9, UB11
16				
17	125-0130	3	U: 4 BIT BINARY ADDER 74LS283	UB7, UB8, UB12
18				
19	124-7408	4	U: QUAD AND 74S08	UA4, UA7, UA10, UA12
20				
21	124-7404	3	U: HEX INV 74S04	UA3, UC2, UE2
22				
23	100-4102	27	C: FXD CER .1uf ±20% 50V	C1, C3-C28
24				
25	353-1604	2	SOCKET: IC 16 PIN DIP ST	UE4, UD4
26	368-5002	2	INSULATOR	UE4, UD4
27	353-1801	24	SOCKET: IC 18 PIN DIP ST (82S185)	UE5-UE12, UD5-UD12, UC5-UC12
28				
29	364-0401	2	EJECTOR: P.C. CARD	
30				
31	109-6470	1	C: ELECT FXD 47uf 40-63V	C2
32	378-0901	2 1/2	WIRE: BUSS 30 GA.	
33	352-1602	1	PLATFORM ADAPTER	UE4

29

LTR	ECO NO.	CHANGED BY	APPVD BY	DATE
A	RELEASE	.		1-4-77

X-75 > PWRUP

X-71 > $\overline{PECNT}$

FROM A4-6 > $\overline{ACLR}$ — 74S04 A3, 74S04 A3

X-17 > CNTGATE — 74S04 A3

74S04 A3

74LS283 B7: J0 J1 J2 J3; K0 K1 K2 K3; A4 A3 A2 A1; B4 B3 B2 B1; E4 E3 E2 E1; CO; BO

74S257 B6: 4A 3A 2A 1A; 4B 3B 2B 1B; 4Y 3Y 2Y 1Y; S; CE

74S163 A6: P3 P2 PI PO; CLK; CEP; CET; Q3 Q2 Q1 Q0; PE; R; TC

74S32 A5

74S08 A7: OK0 OK1 OK2 OK3 → X-85 X-86 X-87 X-88

74LS283 B8: J4 J5 J6 J7; K4 K5 K6 K7; CO

74S257 B9: K4' K5' K6' K7'

74S163 A9

74S32 A5

74S08 A10: OK4 OK5 OK6 OK7 → X89 X90 X91 X92

74LS283 B12: J8 J9 J10 J11; K8 K9 K10 K11; CO

74S257 B11: K8' K9' K10' K11'

74S163 A11

74S32 A5

74S08 A12: OK8 OK9 OK10 OK11 → X 93 X 94 X 95 X 96

X-77 > ADSEL

X-72 > $\overline{SAVCLK}$

74LS174 A8: CLR; CK; KO' K1' K2' K3' K4' K5'; KO K1 K2 K3 K4 K5

74LS174 B10: CLR; CK; K6' K7' K8' K9' K10' K11'; K6 K7 K8 K9 K10 K11

DRAWN BY:	DATE 2-25	WAVETEK
CHECKED BY:		Wavetek Scientific, Inc.
ENG. APPVL.	4/10/77	10 Volvo Drive
MFG. APPVL.	4-4-77	Rockleigh, NJ 07647

UNLESS OTHERWISE SPECIFIED ALL DIMENSIONS ARE IN INCHES AFTER FINISHING AND TOLERANCES ARE: .XXX ± .XX ± X/X ± 1/64 ∠° ± 1°

TITLE: SCHEMATIC PROM BD

SIZE D | DRAWING NO. 03-004-6425 | REV A | SCALE | SHEET 2 OF 2

SIZE D | DWG NO 03 004 6425 | REV A

LTR	ECO NO.	CHANGED BY	APPV'D BY	DATE
A	SEE SHEET 1 OF 2 FOR REV.			

24 X 82S137
NOTE: 18 PIN DIPS

K11 K10 K9 K8 K7 K6 K5 K4 K3

PROVISION FOR SHORT JUMPER
8K 2K,4K

E5 E6 E7 E8 E9 E10 E11 E12
D5 D6 D7 D8 D9 D10 D11 D12
C5 C6 C7 C8 C9 C10 C11 C12

74S138 E4
K2 K1 KØ
VCC
G1 G2A G2B

74S138 D4
PROVISION FOR SHORT JUMPERS
2K OMIT
4K
2K:OMIT
8K

PWRUP

I REG
74S174 E3
LØ L1 L2 L3 L4 L5 L6 L7 L8 L9 L10 L11
C CLR

74S37's
IØ X-47
I1 X-48
I2 X-49
I3 X-50
I4 X-51
I5 X-52
I6 X-53
I7 X-54
I8 X-55
I9 X-56
I10 X-57
I11 X-58

74S04

J REG
X18 ROMGATE
74S32 A5

74S174 E1
JØ X-59
J1 X-60
J2 X-61
J3 X-62
J4 X-63
J5 X-64
+5

A3-13

74S174 C1
J6 X-65
J7 X-66
J8 X-67
J9 X-68
J10 X-69
J11 X-70
+5

X-78 RCLK
74S32 A5
74S08 A4
74S08 A4
74S08 A4
74S08 A4

2K PROMS: (82S131)
- OMIT LOWER JUMPERS (NOT REQ'D)
- SET UPPER JUMPER AS SHOWN
- INSTALL UPPER 74S138 - E4
- OMIT LOWER 74S138 - D4

4K PROMS: (82S137)
- SET LOWER JUMPERS AS SHOWN
- SET UPPER JUMPER AS SHOWN
- OMIT UPPER 74S138
- INSTALL JUMPERS FROM PIN 1 TO OUTPUT PINS ON UPPER SOCKET FOR 74S138 - E4
- INSTALL LOWER 74S138 - D4

8K PROMS: (82S185)
- SAME AS 4K PROMS EXCEPT CONNECT PIN 2 TO OUTPUTS OF UPPER 74S138 SOCKET - E4

NOTE: ALL IC'S ON THIS PAGE REQUIRE SOCKETS

DRAWN BY: AVE	DATE: 10-79	WAVETEK
CHECKED BY:		Wavetek Scientific, Inc.
ENG APPVL:		10 Volvo Drive
MFG APPVL:		Rockleigh, NJ 07647

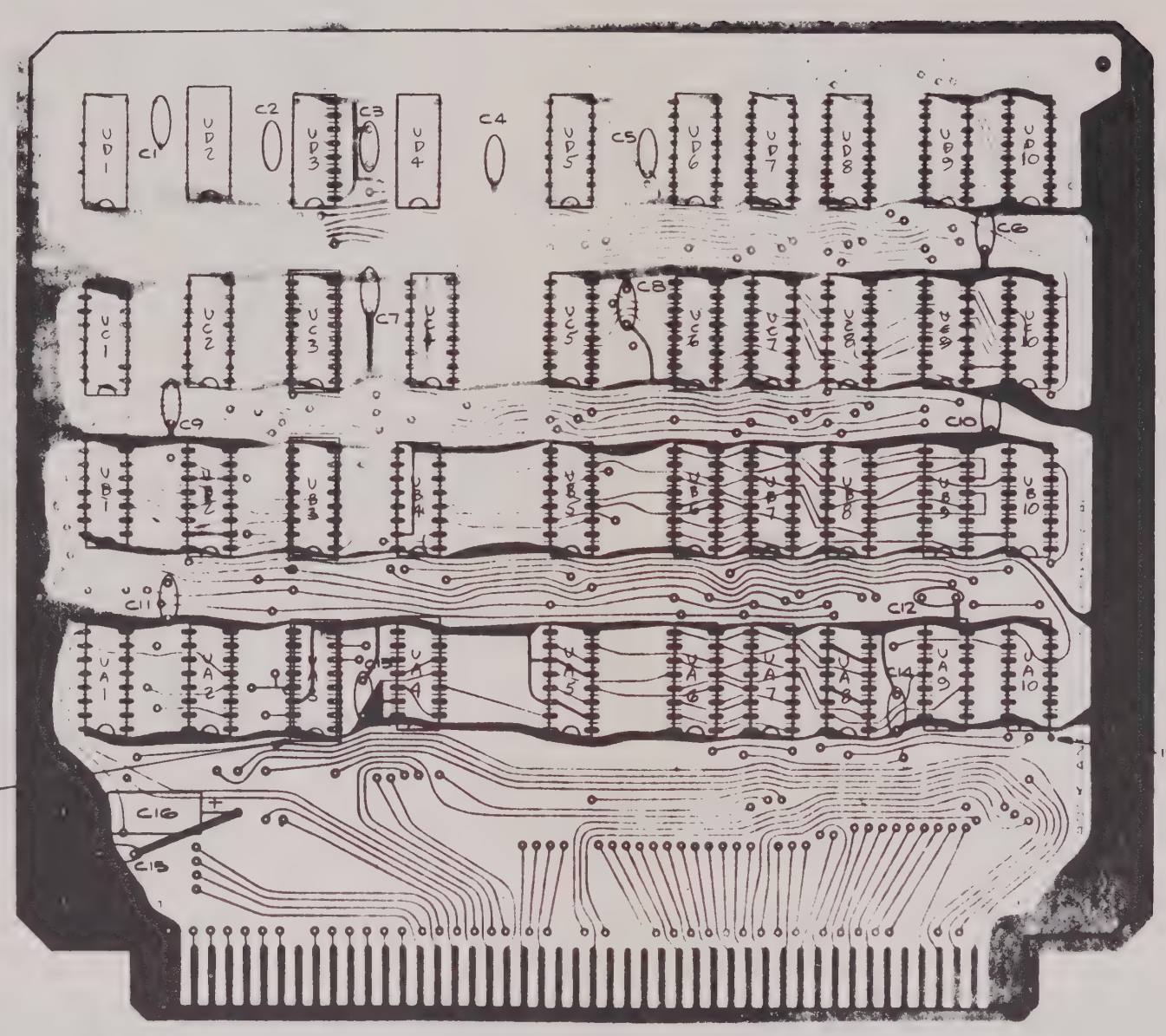
UNLESS OTHERWISE SPECIFIED ALL DIMENSIONS ARE IN INCHES AFTER FINISHING AND TOLERANCES ARE
.XXX ±
.XX ±
X/x ± 1/64
∠° ± 1°

TITLE: SCHEMATIC PROM BD.

SIZE D | DRAWING NO: 03 004 6425 | REV A | SCALE ~ | SHEET 2 OF 2

03 004 6425 A

A	RELEASE		
B	934	T.H. 6/78	
C	987	M.McMINN	



SHEET 2 IS "A" SIZE L/M.

WAVETEK
Wavetek Scientific, Inc
10 Volvo Drive
Rockleigh, NJ 07647

ASSEMBLY
SCRATCH PAD P.C.B.

SIZE D | DRAWING NO 02 004-6430 | REV C | SCALE 1:1 | SHEET 2 OF 2

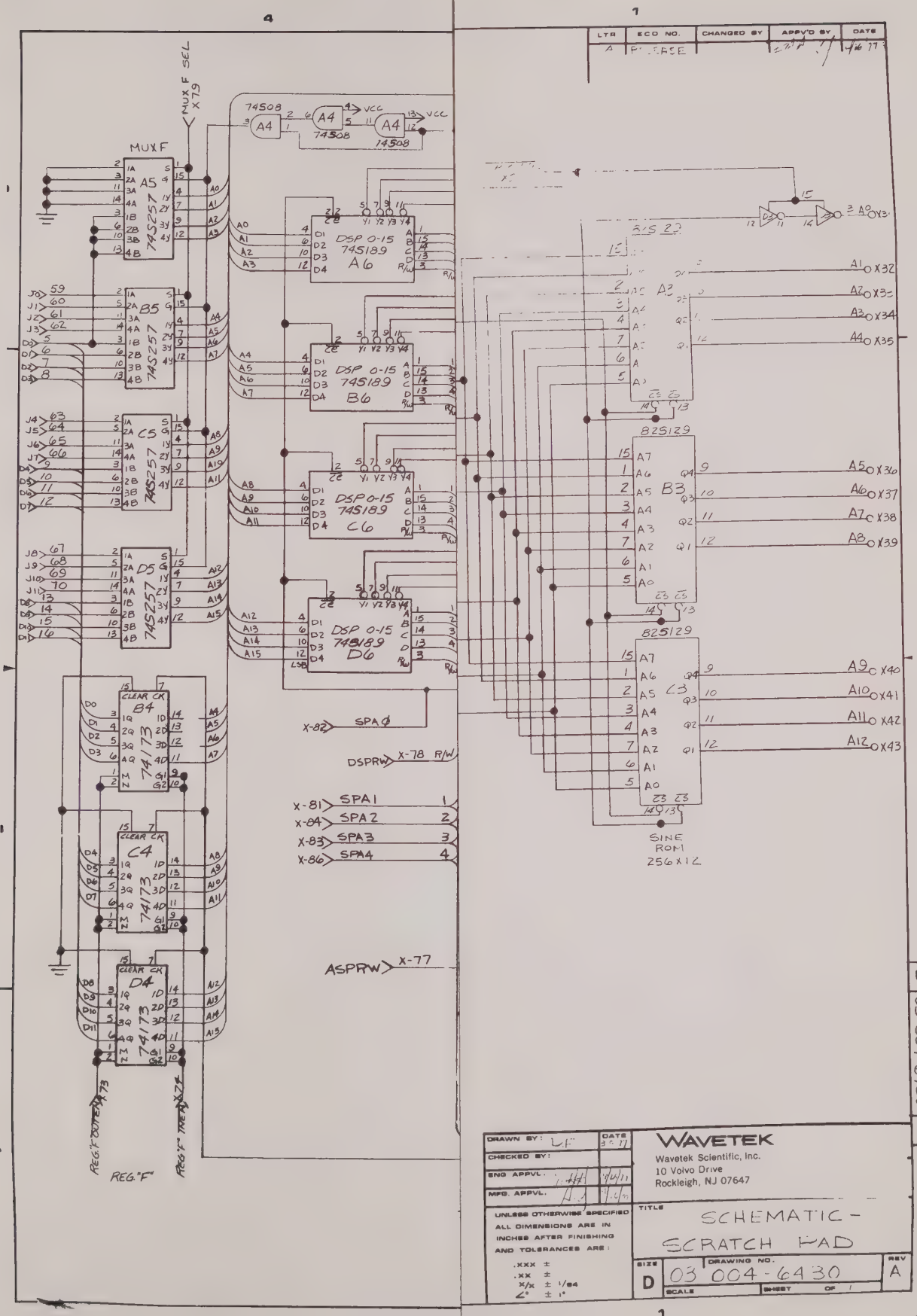
WAVETEK®

TITLE: ASSEMBLY SCRATCHPAD P.C.B.

LIST OF MATERIAL: 02 004-6430 REV C

RELEASE AUTHORITY | CHK BY | DRAWN BY | ASSY SIZE | DATE 3/77 | 2 | 2

ITEM	PART NO	QTY	DESCRIPTION		REFERENCE
1	01-320-6430	1	SCRATCHPAD P.C.B.		
2					
3	125-0130	3	U: 4 BT FULL ADDER	74LS283	UA2, UB2, UC2
4	125-7486	2	U: QUAD 2 IN	74LS86	UB1, UC1
5	125-0109	2	U: Hx TYPE F F	74LS174	UA1, UD1
6	122-0132	1	U: Hx BUS DRI	74368	UD3
7	122-0120	6	U: 4 BT REG	74173	UB4, UC4, UD4, UB10, UC10, UD10
8	129-3009	11	U: 16x4 RAM CERAMIC	74S189J	UA6, UA7, UB6, UB7, UB9, UC6, UC7, UC9, UD6, UD7, UD9
9					
10	124-0126	4	U: QD 2/1 MPLXR	74S257	UA5, UB5, UC5, UD5
11	124-0127	4	U: QD 2/1 MPLXR	74S258	UA8, UB8, UC8, UD8
12	124-7408	2	U: QD 2 AND GATE	74S08	UA9, UA4
13	124-7430	1	U: 8 IN AND GATE	74S30	UD2
14	124-7404	1	U: HEX INVERT	74S04	UA10
15					
16	021-5007	1	PROM: C3-6430-129-3004		SIGNETICS 82S129 UC3
17	021-5008	1	PROM: B3-6430-129-3004		" " UB3
18	021-5009	1	PROM: A3-6430-129-3004		" " UA3
19					
20	364-0401	2	P.C. EJECTORS		
21					
22	109-6470	1	C: ELECT 47uf 40-63V		C16
23	100-4102	15	C: FXD CER .1UF ± 20% 50V		C1-C15
24					
25	353-1604	3	I.C. SOCKET: 16 PIN		INSTALL IN POS. UA3, UB3, UC3
26	368-5002	3	INSULATOR: I.C. SOCKET 16 PIN		" " " " " "
27					
28					
29					
30					
31					
32					
33					


LTR
ECO NO.
CHANGED BY
APPV'D BY
DATE
A
MUX F SEL X79
MUXF
74S257
A5
B5
C5
D5
B4
C4
D4
74173
74S08
DSP 0-15 74S189
A6
B6
C6
D6
825129
B3
C3
SINE ROM 256X12
A1 X32
A2 X33
A3 X34
A4 X35
A5 X36
A6 X37
A7 X38
A8 X39
A9 X40
A10 X41
A11 X42
A12 X43
X-82 SPAØ
DSPRW X-78 R/W
X-81 SPA1
X-84 SPA2
X-83 SPA3
X-86 SPA4
ASPRW X-77
REG."F" OUTPUT X73
REG."F" INPUT X74
REG."F"
DRAWN BY: L.F.
CHECKED BY:
ENG APPVL.
MFG. APPVL.
UNLESS OTHERWISE SPECIFIED ALL DIMENSIONS ARE IN INCHES AFTER FINISHING AND TOLERANCES ARE:
.XXX ±
.XX ±
X/x ± 1/64
∠° ± 1°
WAVETEK
Wavetek Scientific, Inc.
10 Volvo Drive
Rockleigh, NJ 07647
TITLE
SCHEMATIC - SCRATCH PAD
SIZE D
DRAWING NO. 03 004-6430
REV A
SCALE
SHEET OF 1

LTR	ECO NO.	CHANGED BY	APP'D BY	DATE
A	RELEASE			2/16/77

MUX F SEL X-79

MUX H SEL X-72

MUXFEN X-80

MUXF

MUXH

74S257

74S258

74S08

74S04

74S74

74S51

74S86

74S30

74S283

74173

DSP 0-15 74S189

DSP 16-31 74S189

ASP 0-15 74S189

+5

X31 X32 X33 X34 X35 X36 X37 X38 X39 X40 X41 X42 X43 X44 X45 X46

X19 X20 X21 X22 X23 X24 X25 X26 X27 X28 X29 X30

R0 R1 R2 R3 R4 R5 R6 R7 R8 R9 R10 R11

SPA0 X-82

DSPRW X-78 R/W

SPA1 X-81

SPA2 X-84

SPA3 X-83

SPA4 X-86

ASPRW X-77

REG."F" OUTER X-73

REG."F" INNER X-74

REG."H" INNER X-76

REG."H" OUTER X-75

REG."F"

REG."H"

74S04 X89

ACLK (SHEET 2)

E GATE X92

ACLK (FROM SHT 1)

X93 TRIS POSITIVE

X85 X94

E REG.

X37 A6 X38 A7 X39 A8 X40 A9

X41 A10 X42 A11 X43 A12 X44 A13 X45 A14 X46 A15

CLR X-95

74L86

90°/270° FULL SCALE ENABLE

SINE ROM 256X12

A1 X32 A2 X33 A3 X34 A4 X35 A5 X36 A6 X37 A7 X38 A8 X39 A9 X40 A10 X41 A11 X42 A12 X43

DRAWN BY: LH	DATE 2/11	WAVETEK
CHECKED BY:		Wavetek Scientific, Inc.
ENG APPVL:	2/11	10 Volvo Drive
MFG APPVL:	2/11	Rockleigh, NJ 07647

UNLESS OTHERWISE SPECIFIED ALL DIMENSIONS ARE IN INCHES AFTER FINISHING AND TOLERANCES ARE: .XXX ± .XX ± X/X ± 1/64 ∠° ± 1°

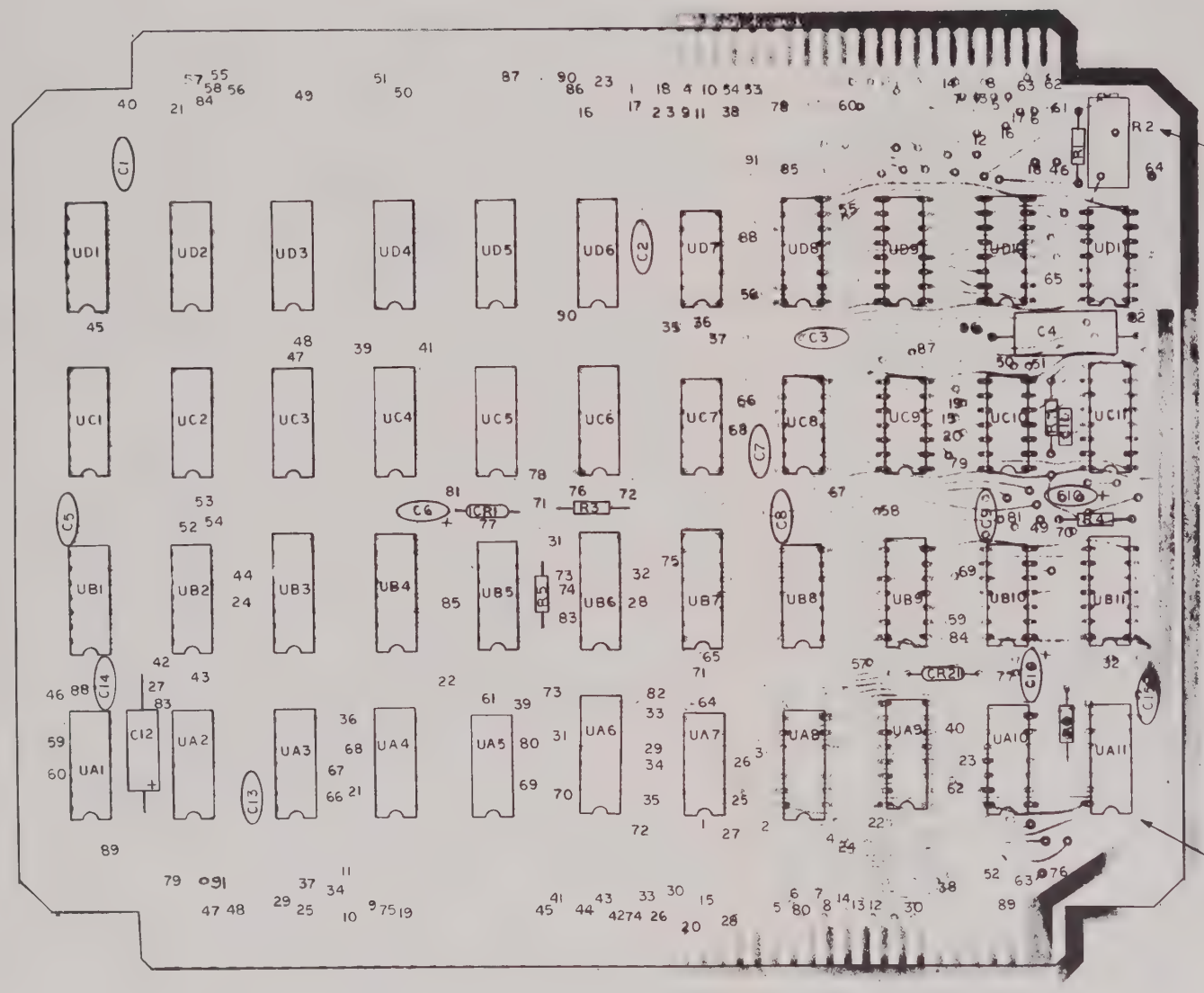
TITLE: SCHEMATIC - SCRATCH PAD

SIZE D | DRAWING NO. 03-004-6430 | REV A

SCALE | SHEET OF 1

03-004-6430

REV	DWG #	DESCRIPTION	APPROVED BY	DATE
A	RELEASE			2/6
B	742			3/9/77
C	743			3/9/77
D	837			9/77
E	934	T-6.78		
F	987	M.McMINN		



SHEETS 2 THRU 3 ARE "A" SIZE L/M

DRAWN BY T. H.	DATE 9/21/77	WAVETEK Wavetek Scientific Inc 10 Volvo Drive Rockleigh, NJ 07647
CHECKED BY:		
ENG APPVL.	10/77	
MFG APPVL.	10/77	

UNLESS OTHERWISE SPECIFIED ALL DIMENSIONS ARE IN INCHES AFTER FINISHING AND TOLERANCES ARE
.XXX ±
.XX ±
X/X ± 1/64
2° ± 1°

TITLE: ASSEMBLY
FRONT PANEL INTERFACE

SIZE D | DRAWING NO 02-320-6435 | REV E
SCALE 2/1 | SHEET 1 OF 3

WAVETEK®

TITLE: FRONT PANEL INTERFACE

LIST OF MATERIAL: 02 004-6435 REV: F

RELEASE AUTHORITY | CHK BY | MFG | ASSY SIZE: D | DATE | SHEET 2 OF 3

ITEM	PART NO.	QTY	DESCRIPTION	NOTES
1	01-320-6435		P.C. BOARD	
2				
3	128-2331	6	U: PULL UP NET 3.3X 15	D2, UC2, D5, C5, D9, R9
4				
5	125-0109	1	U: HEX D-TYPE FLIP-FLOP	74LS174, B7
6				
7	125-0129	2	U: QUAD R-S FLIP-FLOP	74LS279, D10, D8
8				
9	125-7474	4	U: DUAL D-TYPE FLIP-FLOP	D7, B11, B10, B8
10				
11	122-7414	1	U: HEX SCHMITT TRIGGER	B5
12				
13	122-7410	1	U: TRIPLE 3-IN NAND	7410, A10
14				
15	125-7451	1	U: DUAL AOI	A2
16				
17	125-0125	4	U: DUAL 4IN MUX	74LS253, D3, D1, D4, D6
18				
19	124-0124	4	U: 8-IN MUX	74S251, UC1, UC3, UC6, UC4
20				
21	124-7404	1	U: HEX INVERTER	B2
22				
23	125-7402	1	U: QUAD 2-IN NOR	A7
24				
25	122-0107	1	U: DUAL MONO MULTI	74123, UC11
26				
27	122-0132	2	U: HEX TRI-STATE INVERTER	74368, B4, B3
28				
29	125-7408	2	U: QUAD 2-IN AND	B1, B9
30				
31	122-7400	4	U: QUAD 2-IN NAND	A4, C7, A11, UC9
32				
33	122-7406	1	U: HEX DRIVER	UC10

WAVETEK

TITLE: FRONT PANEL INTERFACE

LIST OF MATERIALS: 02 004-6435 F

RELEASE AUTHORITY | CHK BY | DWN | DES | ASSY SIZE: D | DATE | 3 3

ITEM	PART NO	QTY	DESCRIPTION	
34	125-7400	3	U: QUAD 2-IN NAND	D11, A8, A5
35				
36	125-7404	1	U: HEX INVERTER	A1
37				
38	122-7474	1	U: DUAL D TYPE FLIP FLOP	A3
39				
40	116-3271	2	R: FXD COMP 27K 1/4W 5%	R7, R4
41				
42	109-5100	2	C: TANT ELECT 1Uf	C6, C16
43				
44	122-8334	1	U: ADDRESSABLE LATCH	8334 9334, B6
45				
46	125-0117	1	U: 8-INPUT MAX	74LS151, A6
47				
48	122-7438	1	U: QUAD 2-IN DC NAND	UC8
49				
50	100-4102	10	C: FXD CER .1Uf ±20% 50V	C1, C2, C3, C7, C5, C8, C9, C14, C13, C15
51				
52	109-6470	1	C: ELECT 47uf 40-63V	C12
53				
54	354-0003	182	CONN: WW POST .025 SQ	
55				
56	132-0457	2	CR: LW LK 70 PIV 200MW-IN457A	CR1, CR2
57				
58	116-3121	2	R: FX COMP 12K OHM 5% 1/4W	R5, R6
59				
60	116-1271	1	R: FX COMP 270 OHM 5% 1/4W	R1
61				
62	101-1100	1	C: FX MICM DP 100Pf 1% 100V	C11
63	109-6680	1	C: FX TANT 68 Uf 20% 6V	C10
64	104-5102	1	C: FX PLYCAPB 1.0Uf 5% 50V	C4
65	118-2500	1	R: VAR CMT 5.0K RECT	R2
66	116-1471	1	R: FXD COMP 470Ω 1/4W 5%	R3

37

LTR	ECO NO.	CHANGED BY	APPVD BY	DATE
A	RELEASED			3/9/77
B	743	Paul 3/22/77		4/7/77
C	837	Paul 9/7/77		9/14/77
D	1734	ARA 7/5/84		

NOTE:
1. NUMBERS IN SQUARE BOXES REPRESENT WIRE WRAP PINS.

DRAWN BY	DATE
CHECKED BY:	
ENG APPVL.	
MFG APPVL.	

UNLESS OTHERWISE SPECIFIED ALL DIMENSIONS ARE IN INCHES AFTER FINISHING AND TOLERANCES ARE .XXX ± .XX ± X/x ± 1/64 ∠° ± 1°

WAVETEK
Wavetek Scientific, Inc.
10 Volvo Drive
Rockleigh, NJ 07647

TITLE: SCHEMATIC FRONT PANEL INTERFACE

SIZE D | DRAWING NO. 03-004-6435 | REV D | SCALE ~ | SHEET 1 OF 2

DWG NO 03-004-6435

LTR	ECO NO.	CHANGED BY	APPV'D BY	DATE

SEE SHEET ONE FOR REVISIONS

DRAWN BY:	T H	DATE	11/7/77
CHECKED BY:			
ENG. APPVL.			9/9/77
MFG. APPVL.			3/8/77

UNLESS OTHERWISE SPECIFIED ALL DIMENSIONS ARE IN INCHES AFTER FINISHING AND TOLERANCES ARE: .XXX ±, .XX ±, X/x ± 1/64, ∠° ± 1°

WAVETEK
Wavetek Scientific, Inc.
10 Volvo Drive
Rockleigh, NJ 07647

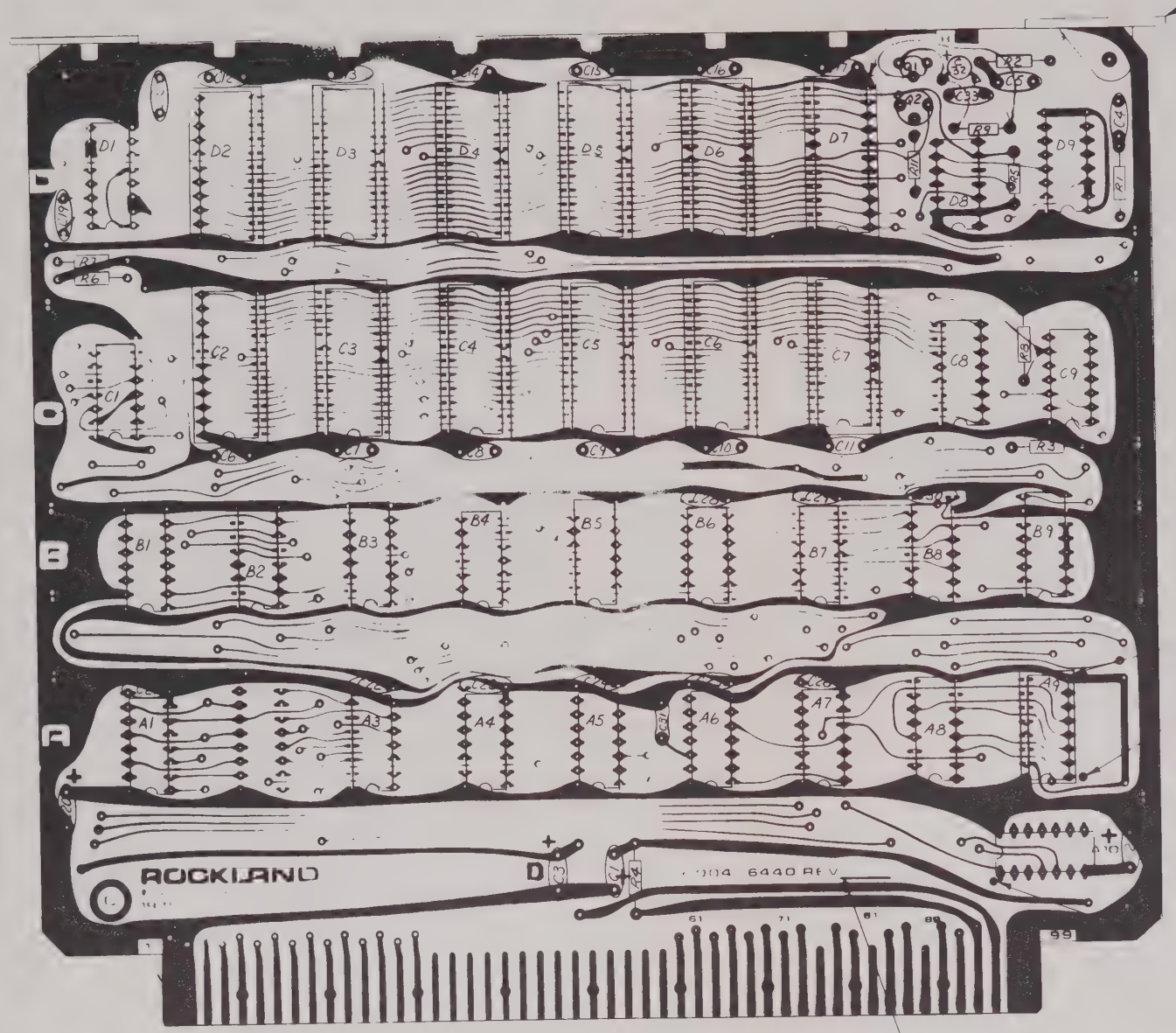
TITLE: SCHEMATIC
FRONT PANEL INTERFACE

SIZE D | DRAWING NO. C3 004-6435 | REV D | SCALE — | SHEET 2 OF 2

D | 03-004-6435 | REV

LTR	ECO NO	CHANGED BY	APPRV'D BY	DATE
A	372	DF 1/1/76	JH DH	1/8/76
B	400	DF 1/22/76	DH JH	1-12-76
C	403	DF 1/23/76	DH JH	1-23-76
D	496	DF 3-25-76	DH PMW	3-25-76
E	571	WH 6-24-76	KW JH	7-2-76
F	731	WH 1/13/77	[illegible]	1-13-77
G	906	DHS 3-20-78	[illegible]	5/5/78
H	934	[illegible]	[illegible]	7/19/78
J	1098A	PWO 3/80	[illegible]	3/25/80
K	1787	WH 7/9/84		

(42) (27)



(41) (28)

INDICATES PIN 1 (TYP)

(REF)

COMPONENT SIDE

SEE NOTE 1

NOTES

1- STAMP APPLICABLE ASSY DWG NO AND USEABLE REV LETTER PER INK SPEC DWG NO. 00-9995-0001

2- SHEETS 2 & 3 ARE A SIZE 4/1

DRAWN BY	DATE
CHECKED BY	
ENG APPVL	
MFG APPVL	

UNLESS OTHERWISE SPECIFIED ALL DIMENSIONS ARE IN INCHES AFTER FINISHING AND TOLERANCES ARE
XXX ± .005
XX ± .01
X/x ± 1/64
∠ ± 1°

WAVETEK
Wavetek Scientific, Inc
10 Volvo Drive
Rockleigh, NJ 07647

TITLE
ASSEMBLY
MEMORY BOARD

SIZE D | DRAWING NO 02 004-6440 | REV K
SCALE 3/1 | SHEET 1 OF 3

R797

WAVETEK

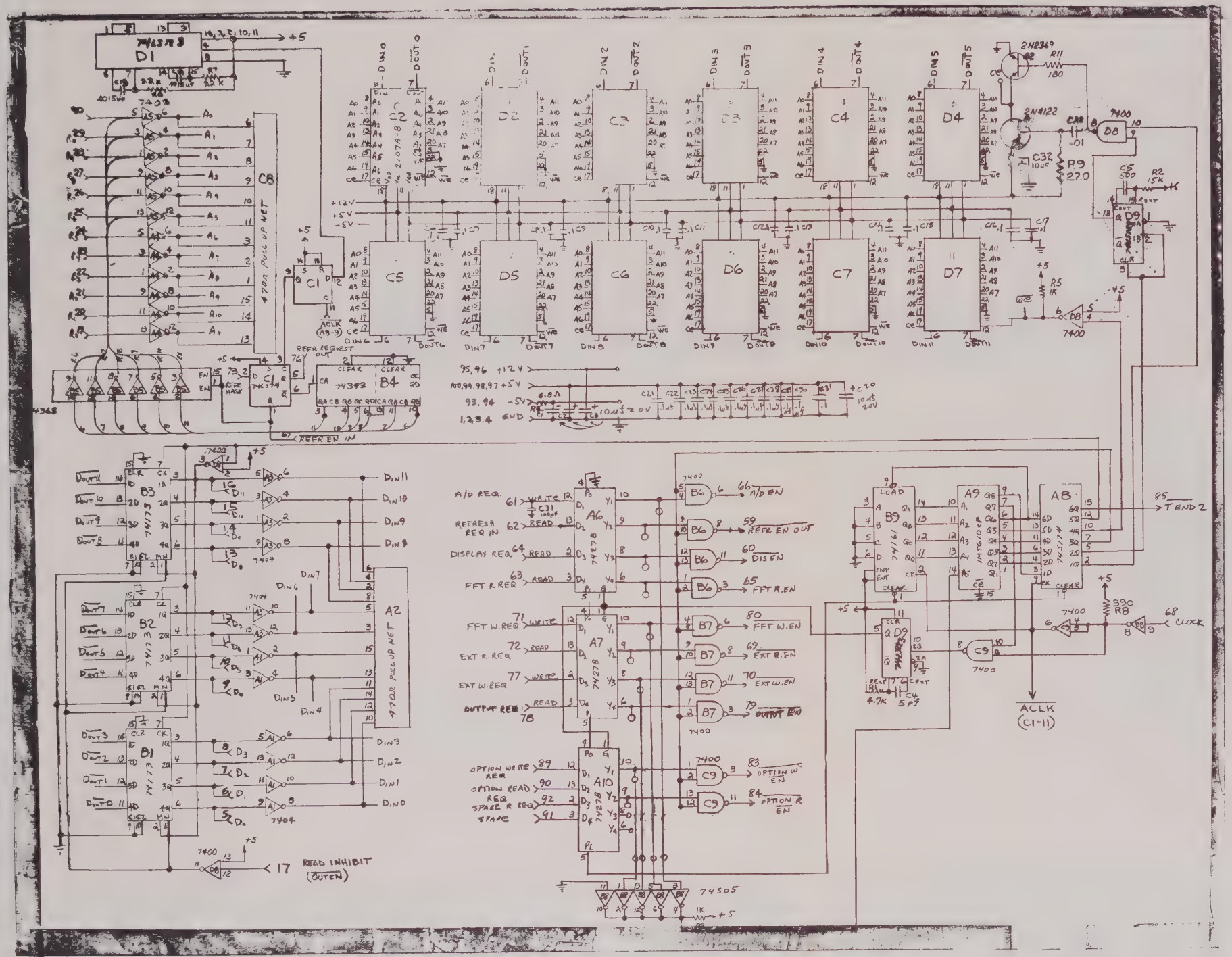
TITLE: ASSEMBLY MEMORY BOARD (5125)

02-004-6440 J

RELEASE AUTH/ORITY | CHK BY | ENG | MFG | ASSY SIZE D | DATE 12-11-75 | SHEET 2 OF 3

	PART NO.	QTY	DESCRIPTION	REFERENCE
1	01-320-6440	1	BOARD P.C.	
2				
3				
4				
5				
6	00-116-2101	2	R: FXD COMP 1K 1/4 W ± 5%	R3, R5
7	00-116-2471	1	R: 4.7K	R1
8	00-116-3151	1	R: 15K	R2
9	00-116-2681	1	R: FXD COMP 6.8Ω 1/4W ± 5%	R4
10	00-116-1391	1	R: FXD COMP 390Ω 1/4W ± 5%	R8
11	00-116-3221	2	R: FXD COMP 22K 1/4W ± 5%	R6, R7
12	00-116-1221	1	R: FXD COMP 220Ω 1/4W ± 5%	R9
13	00-116-1181	1	R: FXD COMP 180Ω 1/4W ± 5%	R11
14	00-101-0050	1	C: FXD MICA 5pf 10% 500V	C4
15	00-101-1500	1	C: FXD MICA 500 pf 10% 500V	C5
16	00-100-2150	2	C: FXD CERAMIC 1500pf 10% 200V	C18, C19
17	00-100-4102	22	C: FXD CERAMIC .1uf ± 20% 50V	C6 THRU C17, C21 THRU C30
18	00-109-6100	5	C: FXD TANT 10uf 20% 20V	C1, C2, C3, C20, C32
19	101-1100	1	C: FXD MICA DP 100pf 10% 500V	C31
20	00-101-3105	1	C: FXD MONO .01uF +80-20% 50V	C33
21				
22				
23	00-136-4122	1	Q: 2N4122	Q1
24	00-134-2369	1	Q: 2N2369	Q2
25				
26				
27	00-353-2201	12	SOCKET I.C. (22 PIN)	USED WITH UC2 THRU UC7, UD2 THRU UD7
28	00-353-1604	1	SOCKET IC (16 PIN)	USED WITH UA3
29	368-5002	1	INSULATOR	
30				
31	00-376-2104	1	SPREADER TRANSISTOR PAD	
32				
33	00-364-0401	2	EJECTOR	

LTR	ECO NO.	CHANGED BY	APP'D BY	DATE
A	372	[illegible] 1/8/76	[illegible]	[illegible]
B	495	[illegible]	[illegible]	[illegible]
C	731	WNT 10/11	[illegible]	1-17-78
D	903	J.S. 3-20-78	[illegible]	5/5/78
E	1098 A	Paul 3/80	[illegible]	3/25/80



DRAWN BY		DATE
CHECKED BY:		
ENG APPVL.		
MFG APPVL.		

UNLESS OTHERWISE SPECIFIED ALL DIMENSIONS ARE IN INCHES AFTER FINISHING AND TOLERANCES ARE:
.XXX ±
.XX ±
X/X ± 1/64
∠° ± 1°

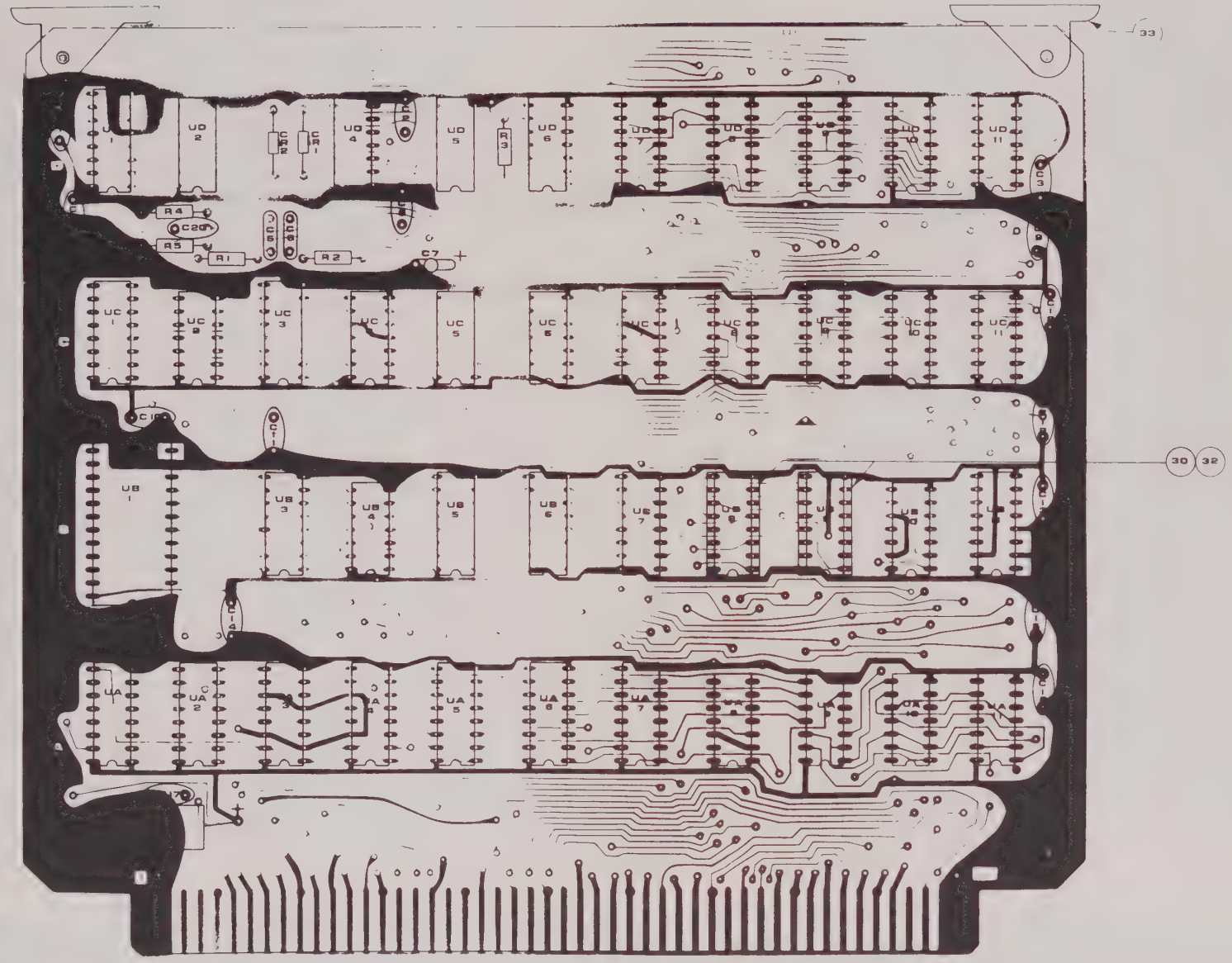
WAVETEK
Wavetek Scientific, Inc.
10 Volvo Drive
Rockleigh, NJ 07647

TITLE
LOGIC DIAGRAM
MEMORY BOARD

SIZE D | DRAWING NO. 03-004-6440 | REV E
SCALE — | SHEET 1 OF 1

SIZE | DWG NO | REV

LTR	ECO NO.	CHANGED BY	APPV'D BY	DATE
A	RELEASE			
B	923			6/8/77
C	943			10/6/77
D	1120A	T.H.	[illegible]	6/5/78
E	995	V.V.=MINN	[illegible]	12/7/78
F	1132	5218P	[illegible]	5/30/79



SHEETS 2 & 3 ARE "A" SIZE L/M

DRAWN BY T.H.	DATE	WAVETEK Wavetek Scientific Inc 10 Volvo Drive Rockleigh NJ 07647
CHECKED BY		
ENG APPVL [illegible]	6/4/78	
MFG APPVL		

UNLESS OTHERWISE SPECIFIED ALL DIMENSIONS ARE IN INCHES AFTER FINISHING AND TOLERANCES ARE
XXX ± .005
XX ± .01
X/X ± 1/64
∠° ± 1°

TITLE
ASSEMBLY
HORIZONTAL P.C.B.

SIZE	DRAWING NO	REV
D	02-004-6445	F
SCALE 2/1	SHEET 1 OF 3	

WAVETEK®

TITLE: HORIZONTAL DISPLAY

LIST OF MATERIAL: 02 004 6445

REV: F

RELEASE AUTHORITY | CHK BY | ENG | MFG | ASSY SIZE: D | DATE | SHEET 2 OF 3

ITEM	PART NO	QTY	DESCRIPTION	REMARKS
1	021 0005	1	PROM B9 6446 129 3001	UB9
2	021 5006	1	PROM B8 6446 129 3004	UB8
4	122 0118	1	74161	UD1
5	122 0134	5	74393	UA9, UA8, UC10, UA10, UC6
6	122 0107	1	74123	UC3
7	122 7432	2	7432	UB4, UD10
8	122 7408	2	7408	UD11, UC8
9	122 7414	1	7414	UC5
10	122 7404	1	7404	UD8
11	122 7438	1	7438	UC2
12	122 7400	2	7400	UD2, UD7
13	122 0117	1	74151	UC9
14	122 7474	1	7474	UC11
15				
16	125 0117	1	74LS151	UB3
17	125 0109	3	74LS174	UA1, UA6, UA7
18	125 0130	3	74LS283	UB5, UB6, UB7
19	125 7451	1	74LS51	UD9
20	125 7474	5	74LS74	UD5, UC4, UD6, UC7, UD4
21	125 0127	3	74LS258	UA3, UA4, UA5
22	125 7486	2	74LS86	UA11, UB10
24	129 3006	1	2516 ROM	UB1
26	124 0114	1	74S134	UB11
28	128 2331	1	3.3K PULL UP NET 16 PIN	UC1
29	128-2151	1	1.5K PULL UP NET 16 PIN	UA2
30	353 1604	2	SOCKET 16 PIN DIP ST	INSTALL IN B9, B8
31				
32	368 5002	2	INSULATOR	USE IN B8, B9
33	364 0401	2	EJECTORS & PINS	

WAVETEK

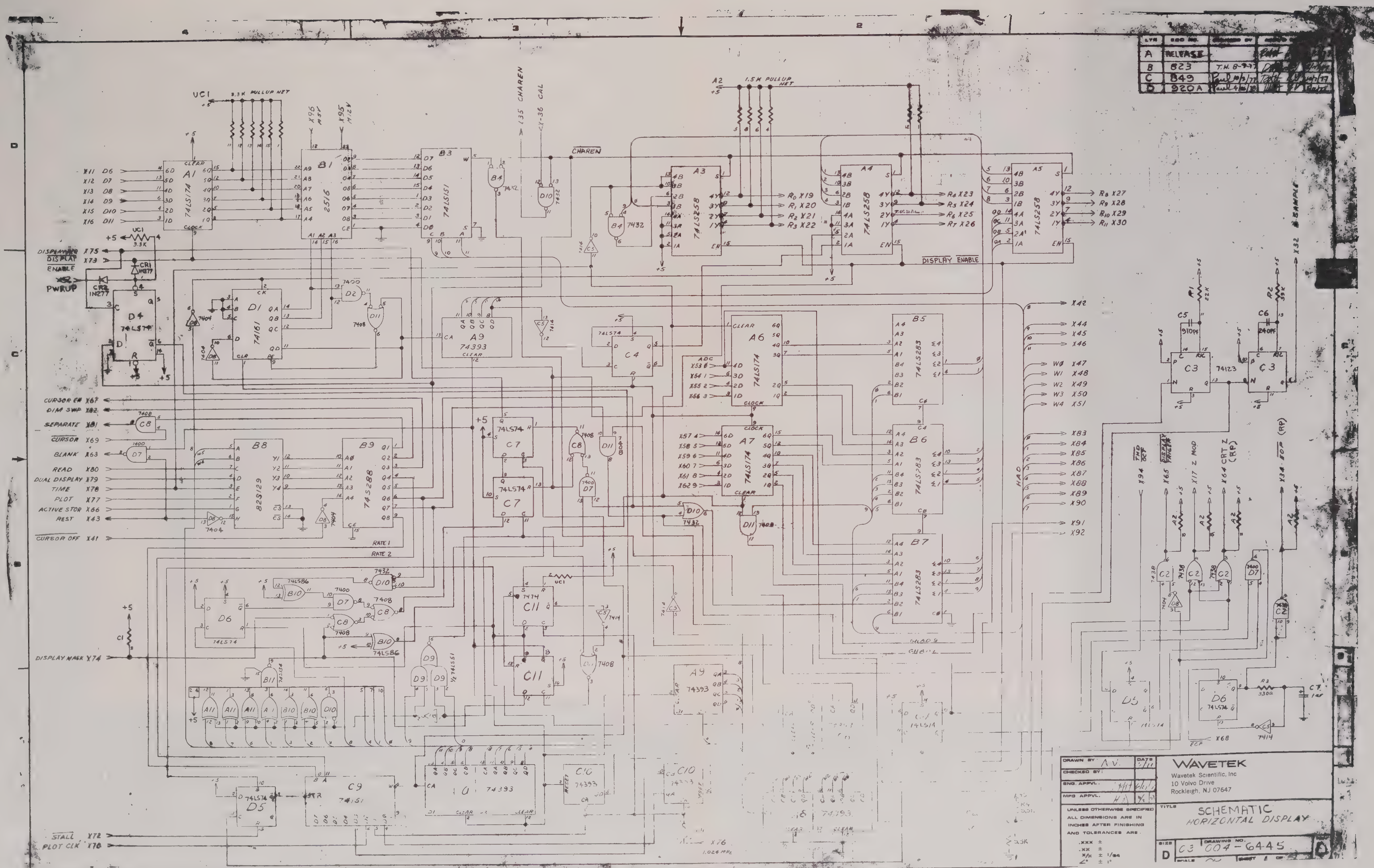
TITLE: HORIZONTAL DISPLAY

LIST OF MATERIAL: 02 004 6445

REV: F

RELEASE AUTHORITY	CHK BY	ENG	MFG	ASSY SIZE	DATE	SHEET 3 OF 3

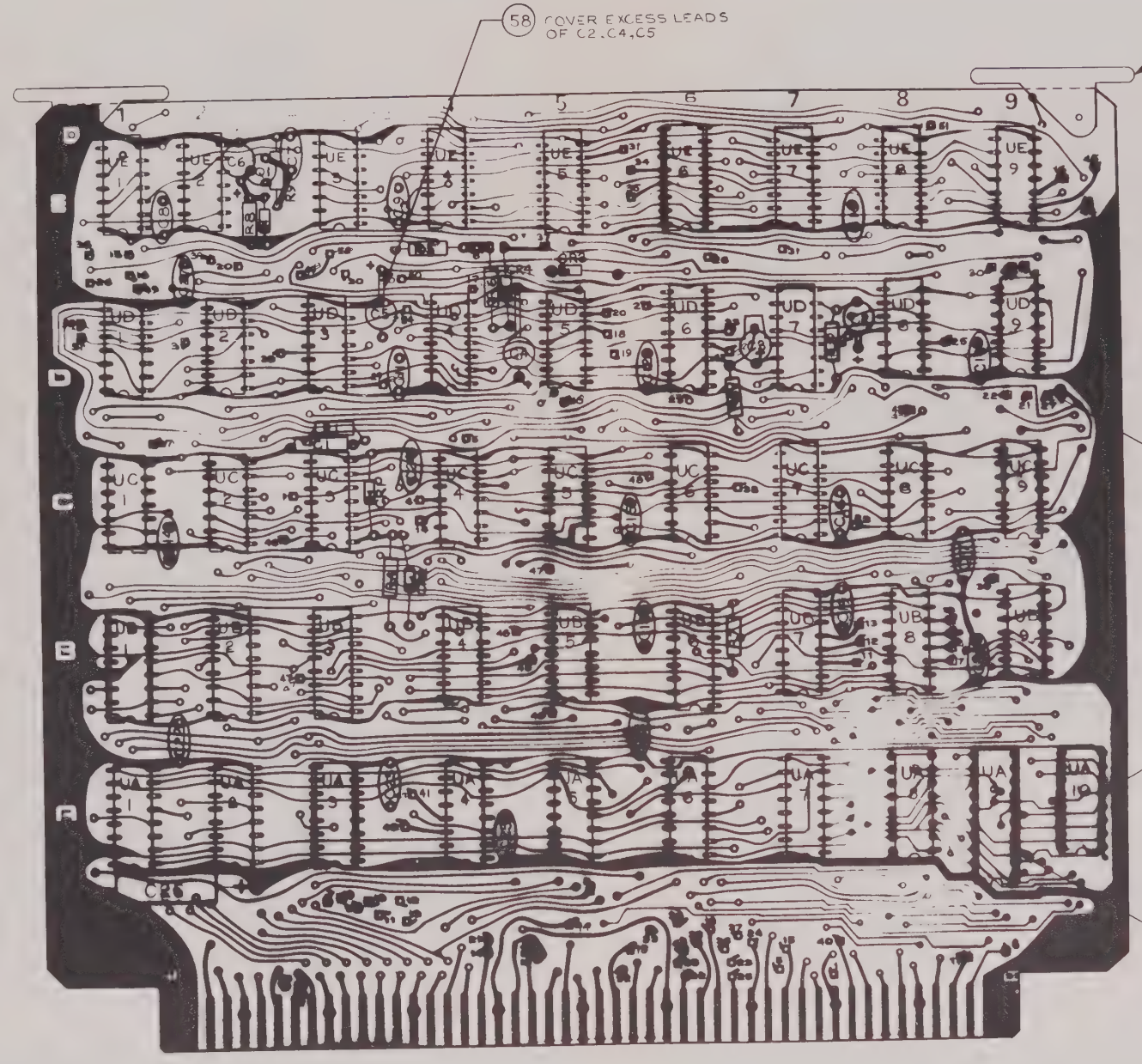
	PART NO.	QTY	DESCRIPTION	REMARKS
34	100 4102	15	C: FX. MONO .1uf +80-20% 50V	C1-C4, C8-C18
35	100 3105	1	C: FX " .01 uF " " "	C20
36	101 1910	1	C: FXD MICA 910 pf 1%	C5
37	101 1240	1	C: FXD MICA 240 pf 10%	C6
39	109 6470	1	C: FXD ELECT 47 uf 40-63V	C19
40	109 5100	1	C: FXD TANT 1.0uf 20% 35V	C7
41	116 2331	2	R: FX COMP 3.3K 1/4W 5%	R4, R5
42	116 3221	1	R: FXD COMP 22K 1/4W 5%	R1
43	116 3391	1	R: FXD COMP 39K 1/4W 5%	R2
44	116 1331	1	R: FXD COMP 330Ω 1/4W 5%	R3
45	132 0277	2	CR: GER 120 PIV 100MA (1N277)	CR1, CR2
47	368 5002	2	INSULATOR	INSTALL IN B9, B8
49	01 320 6445	1	HORIZ. P.C.B.	



WAVETEK
Wavetek Scientific, Inc
10 Volvo Drive
Rockleigh, NJ 07647
SCHEMATIC
HORIZONTAL DISPLAY
D C3 004-6445
DRAWN BY A.V.
CHECKED BY:
ENG. APPVL.
MFG APPVL.
UNLESS OTHERWISE SPECIFIED ALL DIMENSIONS ARE IN INCHES AFTER FINISHING AND TOLERANCES ARE:
A RELEASE
B 823 T.H. 8-9-77
C 849
D 920A
DISPLAY ENABLE
CHAREN
135 CHAREN
X-36 CAL
X32 SAMPLE
X34 EOP (RP)
X64 CRT Z (RP)
X17 Z MOD
X65 DISPLAY TRIGER
X94 THD OCT
1.5K PULLUP NET
3.3K PULLUP NET
CURSOR EN X67
DIM SWP X82
SEPARATE X81
CURSOR X69
BLANK X63
READ X80
DUAL DISPLAY X79
TIME X78
PLOT X77
ACTIVE STOR X66
REST X43
CURSOR OFF X41
DISPLAY MASK X74
STALL X72
PLOT CLK X70
PWRUP
X76 1.024 MHz
RATE 1
RATE 2
HAD

47

ZONE	LTR	ECO NO	CHANGED BY	APPR'D BY	DATE
REDRAW	K	1710	JP		



DR JMD	DATE	Wavetek Scientific, Inc 10 Volvo Drive Rockleigh, NJ 07647
CHKD	1/17/89	WAVETEK
ENG		P.C. ASSEMBLY VERTICAL
MFG	1/16/89	
ISSUE		

UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES AND TOLERANCES ARE

SIZE	MODEL NO	DRAWING NO	REV
D	512	02-004-6450	K

MAT'L SAT 263 A SIZE
P/N

SCALE 2:1 CODE IDENT 80681 SHEET 1 OF 3

48

WAVETEK®

TITLE: VERTICAL DISPLAY

LIST OF MATERIAL: 02 004 6450

REV: K

RELEASE AUTHORITY | CHK BY | MFG | ASSY SIZE | DATE | SHEET 2 OF 3

ITEM	PART NO	QTY	DESCRIPTION	REMARKS
1	122.0120	7	74173	UB6, UB7, UB8, UA1, UA2, UA5, UA4
2	122.0134	3	74393	UE8, UE4, UC2
3	122.7474	1	7474	UD8
4	122.7402	1	7402	UB4
5	122.7486	1	7486	UD2
6	122 0123	3	74197	UE5, UE7, UE3
7	122 0107	1	74123	UD7
8	122 0131	2	74367	UA6, UA8
9	122 7410	2	7410	UD5, UB9
10	122 7440	1	7440	UE2
11	122 7432	2	7432	UD9, UC7
12	122 7400	2	7400	UD3, UC6
13	122 7404	2	7404	UE9, UC9
14	122 7408	3	7408	UB5, UD1, UC8
15	122 7414	2	7414	UC3, UD4
16	124 7411	1	74S11	UC4
17	125 7474	3	74LS74	UC5, UC1, UE1
18	125 0126	2	74LS257	UB2, UB3
19	021 0006	1	PROM A3 6451 129 3001	UA3 REV A
20	021 0007	1	PROM E6 6451 129 3001	UE6 REV B
21	021 0008	1	PROM B1 6451 129 3001	UB1 REV —
22				
23	128 2331	1	3.3 K PULL UP NET (16 PIN)	UA7
24	128 2151	1	1.5 K PULL UP NET (16 PIN)	UD6
25	353 1604	4	SOCKET 16 PIN ST DIP	INSTALL IN B1, A3, E6, A10
26	353-2001	1	SOCKET: IC 20PIN DIP ST	INSTALL IN UA9
27				
28	116 0471	1	R FXD COMP 47Ω 1/4 W 5%	R4
29	116 3121	2	R FXD COMP 12K 1/4 W 5%	R6, R5
30	116 1391	3	R FXD COMP 390Ω 1/4 W 5%	R9, R1, R7
31	116 3471	1	R FXD COMP 47K 1/4 W 5%	R8
32	116 3151	1	R FXD COMP 15K 1/4 W 5%	R3
33	116 2681	1	R FXD COMP 6.8K 1/4 W 5%	R2

FORM NO 304

WAVETEK

TITLE	LIST OF MATERIAL	REV
VERTICAL DISPLAY	02 004 6450	K

RELEASE AUTHORITY	CHK BY	ENG	MFG	ASSY SIZE	DATE	SHEET
				D		3 OF 3

ITEM	PART NO	QTY	DESCRIPTION	REMARKS
34	109 5100	2	C FXD TANT 1uf	C4, C5
35	109 6680	1	C FXD TANT 68uf	C6
36	109 4100	2	C FXD TANT .1uf 20% 35V	C3, C2
37	109 6470	1	C FXD ELECT 47uf 40-63V	C26
39	105 2470	1	C FXD PLSTR .0047uf 5% 100V	C1
41	100 3105	1	C FX MONO .01uf +80-20% 50V	C7
42	100-4102	19	C FXD MONO .1uf " " "	C8-C25, C27
44	132 0457	5	CR SIL LOW LEAK IN457A	CR5, CR4, CR3, CR2, CR1
46	134 3565	1	Q NPN SIL 2N3565	Q1
48	364 0401	2	EJECTORS & PINS	
50				
52	354-0007	104	WIRE WRAP PIN	
54	378-1961	A/R	WIRE WRAP WIRE	
56	01-320-6450	1	VERTICAL P.C.B.	
58	378-5221	5"	SLEEVING	
60	021-7501	1	PROM: PGMD A9-6450 (129-3018)	UA9
61	021-7090	1	PROM: PGMD A10-6450 (129-3008)	UA10

LTR	ECO NO.	CHANGED BY	APPVD BY	DATE
A	RELEASE			
B	820			
C	828			
D	840			
E	865			
F	1719	JP 1-3-84		

TIME

CURSOR INTENSITY

CURSOR

BLANK

CAL

HAD BUS

INTENSIFY

CURSOR OSCILLATOR 2 MHz

* MAY BE SELECTED

DRAWN BY:	DATE:	WAVETEK	
CHECKED BY:		Wavetek Scientific, Inc	
ENG APPVL.		10 Volvo Drive	
MFG APPVL.		Rockleigh, NJ 07647	
UNLESS OTHERWISE SPECIFIED ALL DIMENSIONS ARE IN INCHES AFTER FINISHING AND TOLERANCES ARE .XXX ± .XX ± X/X ± 1/64 ∠° ± 1°		TITLE: SCHEMATIC VERTICAL DISPLAY	
		SIZE: D	DRAWING NO: 03 004-6450 REV: F
		SCALE: NONE	SHEET 1 OF 2

51

LTR	ECO NO.	CHANGED BY	APPV'D BY	DATE

SEE SHEET 1 FOR REVISIONS

X73 THDUCT — THDUCT — FREE RUN

X53 ADC Ø — X93 EXTSMPL — EXT ARM — R4 47Ω — CR1 1N457 — CR2 1N457 — D6 1.5K — X71

ARM X68 — X69 EXTRIG — R5 12K — C25 .1uF — D6 5K — CR3 1N457 — D4 — D1 7408

X67 TRIG — D8 7474

X65 ARMED

CLEAR — CLKA E4 ½ 74393 QD — ADEN

LD QA CLKB R — E3 — QD — 74197

LD QA CLKB R — E7 — QD — 74197

LD QC R — CLKB E5 74197 — DB DC

X54 EX-AD REQ. — A7 3.3K — 7402 B4

X56 TDSW1 — X58 TDSW2 — X60 TDSW4 — X62 TDSW3 — D6 1.5K — 74S288 E6 — CE

X66 MAN — .1uf C27

X70 TRIG REL — CR4 1N457 — R6 12K — C4 1uF — D4 — X95 M12V — -12V

74LS74 C5 — MANDIS

C6 7400 — HOLD X63

X40 EOA — 7414 C3 — B5 7408

EXTRIGDIS — STRES X38 — AVGEN X61 — EOP X52 — PROCRST X43 — PRDIS X39 (E9-1) — PROCEN X64 — FULLSMPL

E1 74LS574 — E2 — C1 74LS574 — C8 7408 — D3 7400 — D9 7432

X72 ADEN — OCTRIG — B9 7410 — X96 64 — E9 7404

E4 ½ 74393 CLEAR — E8 74393 — ADACT X81

D5 7410 — D9 7432 — D3 7400 — D1 7408 — D2 7486 — B5 7408 — TIME D4-2

MAN

+5V — R8 47K — CR5 1N457 — Q1 2N3565 — C6 68 MF — R9 330Ω — C7 .01 — X94 PWRUP

03-004-6450 REV D

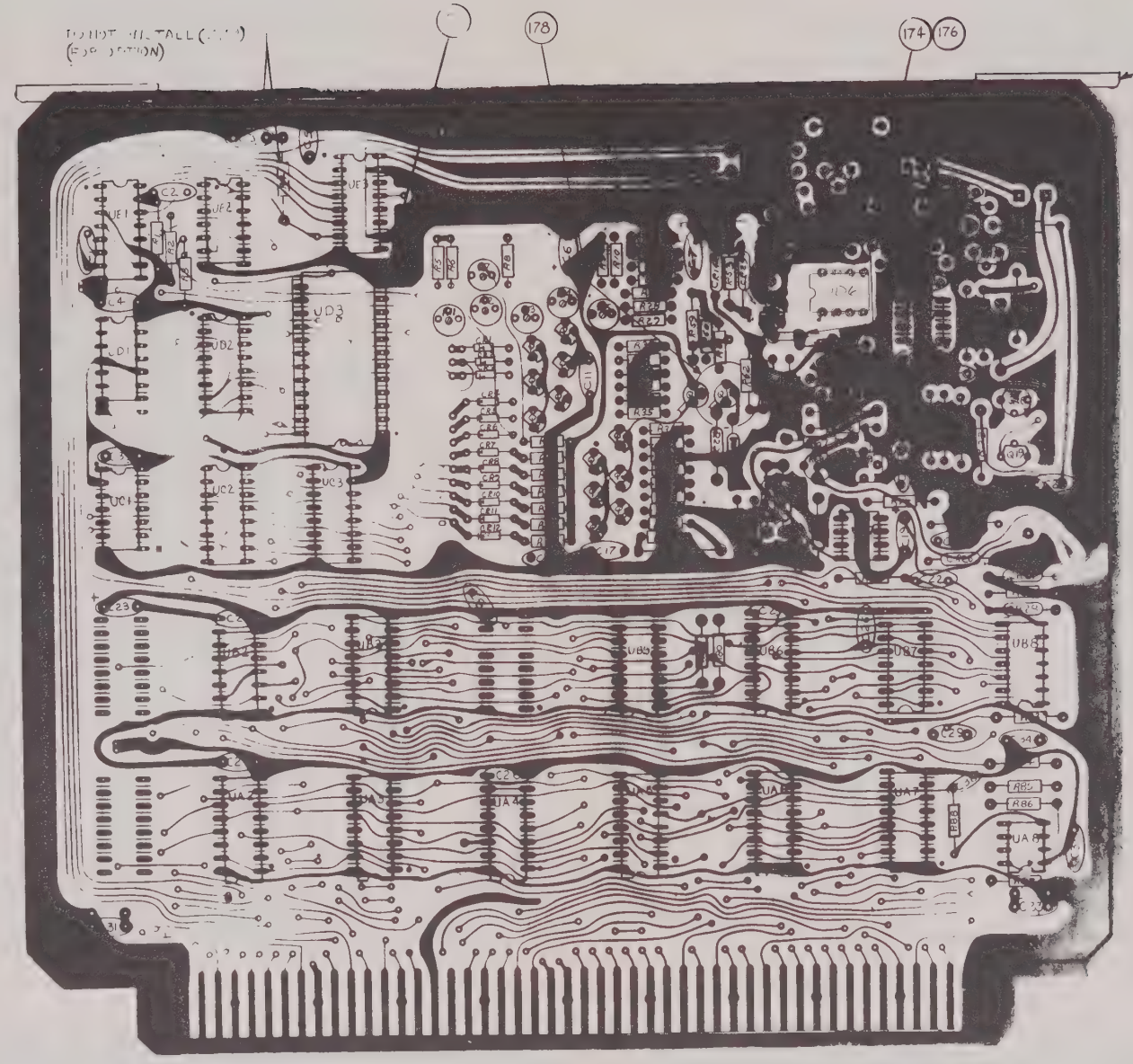
DRAWN BY: L I	DATE 2-11-77	WAVETEK
CHECKED BY:		Wavetek Scientific, Inc.
ENG APPVL:		10 Volvo Drive
MFG APPVL:		Rockleigh, NJ 07647

UNLESS OTHERWISE SPECIFIED ALL DIMENSIONS ARE IN INCHES AFTER FINISHING AND TOLERANCES ARE: .XXX ± .XX ± X/X ± 1/64 ∠° ± 1°

TITLE: SCHEMATIC VERTICAL DISPLAY

SIZE D — DRAWING NO. 03004-6450 — REV F — SCALE ~ — SHEET 2 OF 2

52



THIS ASSY REV B AND ABOVE

TH	6/14	WAVETEK Wavetek Scientific Inc 10 Volvo Drive Rockleigh NJ 07647
		TITLE ASSEMBLY A TO D CONVERTER - SAMPLE & HOLD
		SIZE D · DRAWING NO 02 004-6455 · REV N
		SCALE 2/1 · SHEET 1 OF 1

C038

WAVETEK®

TITLE: ASSEMBLY
A TO D, SAMPLE & HOLD

LIST OF MATERIALS: 02 004-6455 M

RELEASE AUTHORITY	CHK BY	ENG	MFG	ASSY SIZE	DATE	SHEET
				D	5/76	2 OF 7

ITEM	PART NO	QTY	DESCRIPTION		REMARKS
1	01-320-6455	1	A/D, SAMPLE & HOLD, P.C. BOARD		
2					
3	03-004-6455	REF	A/D, SAMPLE & HOLD, SCHEMATIC		
4					
5	353-2402	1	SOCKET, IC 24 PIN		INSTALL IN D3
6					
7	364-0401	2	EJECTOR, P.C. CARD (WITH PINS)		
8					
9	122-0132	2	HX BUS DRI INV	74368	UA2, UA3
10					
11	122-0134	2	DL 4 BT BIN CNT	74393	UA4, UB5
12					
13	122-0131	2	HX 3-ST BUS BUFF	74367	UA5, UB3
14					
15	125-0109	2	HX TYPE D FLIP FLOP	74LS174	UA6, UA7
16					
17	120-3311	1	ANALOG VOLT COMP	LM311	UA8
18					
19	122-7474	3	DUAL D TYPE FLIP FLOP	7474	UB2, UD1, UC1
20					
21	122-7404	1	HEX INVERTER	74p4	UB6
22					
23	122-7432	1	QUAD 2 IN OR GATE	7432	UB7
24					
25	125-7451	1	DUAL 2 WIDE 2 IN GATE	74LS51	UB8
26					
27	128-2151	1	PULL UP NET 1.5K 16 PIN		UC2
28					
29	122-0120	3	4 BT 3-ST D-REG	74173	UC3, UD2, UE3
30					
31	120-1013	1	LIN OP-AMP MIN-DIP	LM301AN	UC7
32					
33	122-2504	1	12 BIT SUCC APROX REG	2504PC	UD3

5 of 7

WAVETEK®

TITLE: ASSEMBLY
A TO D, SAMPLE & HOLD

LIST OF MATERIAL: 02 004-6455 REV M

RELEASE AUTHORITY	CHK BY	ENG	MFG	ASSY SIZE
				D

DATE 5/76 SHEET 3 OF 7

PART NO.	QTY	DESCRIPTION	REMARKS
120-3815	1	DIFF COMPAR TL810CP	UD6
120-1012	1	VOLT FOLLOWER LM310AN	UD7
122-0107	1	DL MNSTBL MVBRTR 74123	UE1
122-7414	1	SMT TGR NAND GATE 7414	UE2
133-2800	14	CR. HOT CARRIER HP2800	CR1-CR12, CR19, CR20
131-9621	4	CR: SL ZR 6.2V 400MW IN823	CR14, CR21, CR13, CR26
132-0457	8	CR: SL LW LK 70 PIV 200MW IN457	CR15, CR16, CR17, CR24, CR25, CR27, CR28, CR29
132-0277	1	CR: GER 120 PIV 100MA (IN277)	CR18
131-9510	1	CR: SL ZR 5.1V ±5% 400MU IN751A	CR22
131-0100	1	CR: SL ZR 10.0V ±5% 400MU IN758A	CR23
136-4122	14	Q: SIL PNP 2N4122	Q1-Q12, Q15, Q16
135-6521	3	Q: SIL NPN MPS6521	Q17, Q19, Q20
134-2222	2	Q: SIL NPN 2N2222	Q13, Q14
138-0660	1	Q: FET N-CHAN MEM 660	Q18

55

WAVETEK

TITLE	LIST OF MATERIAL	REV
ASSEMBLY A TO D, SAMPLE & HOLD	02 004-6455	M

RELEASE AUTHORITY	CHK BY	ENG	MFG	ASSY SIZE	DATE	SHEET
				D	5/76	4 OF 7

ITEM	PART NO	QTY	DESCRIPTION	REMARKS
67	101-0150	2	CAP, MICA, 15 PF, 500V	C1, C2
68				
69				
70				
71	100-4102	20	C:FX MONO, .1 UF, ±20 50V	C4, C5, C8, C9, C10, C12, C13, C16,
72				C17, C20, C23, C24, C25, C26, C27,
73				C28, C29, C31, C34, C35
74				
75	101-1620	2	CAP, MICA, 620 PF, 500V	C14, C38
76				
77	101-0220	1	CAP, MICA, 22 PF, 500V	C15
78				
79	101-1100	2	CAP, MICA, 100 PF, 500V	C11, C22
80				
81	109-6100	5	CAP, TANT, 10 UF, 20V	C6, C18, C19, C21, C32
82				
83	101-1150	1	CAP, MICA, 150 PF, 500V	C30
84				
85	109-6680	1	CAP, TANT, 68 UF, 6V	C33
86				
87	109-5100	1	CAP, TANT 1uF, 35V	C7
88				
89	100-3105	1	C:FX. MONO, .01 uF +80 -20% 50V	C36
90				
91	116-2471	1	RES, 4.7 K, 1/4 W, 5%	R1,
92				
93	116-2331	7	RES, 3.3K, 1/4W, 5%	R3, R56, R57, R76, R82, R2, R88
94				
95	101-1200	1	CAP, MICA, 200 PF, 500 WV	C37
96				
97	110-7871	6	RES, 787Ω, 1/10W, 1%	R5, R6, R8, R9, R10, R16
98				
99	110-8251	6	RES, 825Ω, 1/10W, 1%	R17, R18, R19, R20, R62, R63

WAVETEK®

TITLE: ASSEMBLY
ATOD, SAMPLE & HOLD

USE I.D. MATERIAL: 02 004-6455 | REV: M

RELEASE AUTHORITY | CHK BY | ENG | MFG | ASSY SIZE: D | DATE: 5/76 | SHEET 5 OF 7

		QTY	DESCRIPTION	REMARKS
100	110-4641	1	RES, 464 Ω, 1/10W, 1%	R23,
101	110-5491	2	RES, 549 Ω 1/10W, 1%	R25, R73
102	110-5111	1	RES, 511 Ω, 1/10 W, 1%	R64
103	111-1581	2	RES, 1.58K 1/10W, 1%	R26, R21
104	110-8061	2	RES, 806 Ω, 1/10W, 1%	R27, R28
105				
106	116-0101	1	RES, 10Ω, 1/4W, 5%	R29
107				
108	110-4021	6	RES, 402 Ω, 1/10W, 1%	R42, R44, R34, R36, R38, R40
109				
110	110-4321	1	RES, 432 Ω 1/10W, 1%	R30
111	118-1100	6	RES, VARI, 100Ω, 1/4 RND	R7, R11, R12, R13, R14, R15
112				
113				
114	111-3161	3	RES 3.16K 1/10 W, 1%	R24, R22, R66
115	111-6341	2	RES, 6.34K 1/10W, 1%	R31, R72
116				
117	112-1271	1	RES, 12.7K, 1/10W, 1%	R33
118	110-4121	1	412Ω 1/10W 1%	R 32
119				
120	112-2551	1	RES, 25.5 1/10W 1%	R35
121	112-5111	1	RES, 51.1 K, 1/10W, 1%	R37
122				
123	113-1021	1	RES, 102 K, 1/10W, 1%	R39
124				
125	113-2051	3	RES, 205 K, 1/10W, 1%	R41, R43, R45
126				
127				
128				
129				
130				
131	116-0301	4	RES, 30Ω, 1/4W, 5%	R46, R48, R78, R89
132				

57

WAVETEK®

TITLE: ASSEMBLY
A TO D, SAMPLE & HOLD

02 004-6455 M

RELEASE AUTHORITY | CHK BY | ENG | ECO | ASSY SIZE: D | DATE: 5/76 | SHEET 6 OF 7

	PART NO	QTY	DESCRIPTION	REFERENCE
133				
134	116-1151	2	RES, 150Ω, 1/4W 5%	R49, R50
135	116-1271	1	RES, 270Ω, 1/4W, 5%	R61
136				
137	116-1391	2	RES, 390Ω, 1/4W, 5%	R51, R47
138				
139	110-7501	1	RES, 750Ω, 1/10W, 1%	R53
140				
141	116-0471	4	RES, 47Ω, 1/4W, 5%	R54, R59, R60, R83
142				
143	116-5101	1	RES, 1M, 1/4W, 5%	R55
144				
145	116-1181	1	RES, 180Ω, 1/4W, 5%	R58
146				
147	116-2681	1	RES, 6.8K, 1/4W, 5%	R77
148				
149	116-1681	1	RES, 680Ω, 1/4W, 5%	R65
150				
151	112-1001	1	RES, 10K, 1/10W, 1%	R67,
152				
153	118-3100	1	RES, VARI, 10K, 1/4 RND	R68
154				
155	118-3102	1	R: VAR CMT 10K 3/8 SQ EM	1ST R69
156				
157	116-2221	2	RES, 2.2K, 1/4W, 5%	R70, R71
158				
159	116-1221	1	RES, 220Ω, 1/4W, 5%	R74
160				
161	116-1331	1	RES, 330Ω, 1/4W, 5%	R75
162				
163				
164				
165	116-2201	2	RES, 2K, 1/4W, 5%	R79, R80

585

WAVETEK®

TITLE	LIST OF MATERIAL	REV
ASSEMBLY A TO D, SAMPLE & HOLD	02 004-6455	M

RELEASE AUTHORITY	CHK BY	ENG	MFG	ASSY SIZE	DATE	SHEET
				D	5/76	7 OF 7

PART NO	QTY	DESCRIPTION	REMARKS
116-2101	1	RES, 1K, 1/4W, 5%	R81
116-3101	2	RES, 10K, 1/4W, 5%	R84, R85
116-4471	1	RES, 470K, 1/4W, 5%	R86
116-2151	1	RES, 1.5K, 1/4W, 5%	R87
353-0104	2	SOCKET JUMPER	E1, E2
352-0202	1	PLUG, SHORTING	
367-0413	1	HEAT SINK: TO-18	AAVID 3224B-BLK (MT. ON Q14)

SIZE D	DWG NO. 03-004-6455	REV J1	

DRAWN BY	DATE	WAVETEK	
CHECKED BY:		Wavetek Scientific, Inc.	
ENG APPVL:		10 Volvo Drive	
MFG APPVL:		Rockleigh, NJ 07647	

UNLESS OTHERWISE SPECIFIED
ALL DIMENSIONS ARE IN INCHES AFTER FINISHING
AND TOLERANCES ARE
.XXX ±
.XX ± .01
X/X ± 1/64
∠: ± 1°

TITLE: SCHEMATIC A-D CONVERTER

SIZE D | DRAWING NO. 03-034-6455 | REV F

SCALE ~ | SHEET 1 OF 2

LTR	ECO No.	CHANGED BY	APPVD BY	DATE
A	RELEASED			9-5-78
B	64-5	TH 8/3/78		9/28/78
C	6-CAN	Paul 10/5/78	Walt	10/6/78
D	70CA	Walt 11/3/78		11/27/78
E	795	TH 1/10/79		2/2/79
F	(OBO	JB 11-27-79		12/19

TO SHEET 2

A-D CNT CLEAR

A-DEN

LADCEN

A-D MASK

AD REG

ADACT

CONV. COMPL.

CONVERT CLOCK

A TO D CONVERTER
(SEE SHEET 2)

CAL SIGNAL

INT SAMPLE CLK

EXT SAMPLE CLK

EXT AD REG. CLK

AD REG CLK INT

THD ODT

OLLINITIGIT

AGLK

LOAR

LO SENSE

TRIG DET 2

TRIG RD

TRIGOUT

TRIGIN

LTR	ECO NO.	CHANGED BY	APPVD BY	DATE

SEE SHEET 1 FOR REVISIONS

NOTE: ALL RESISTORS 5% UNLESS SPECIFIED

NOTE: ALL RESISTORS 1% UNLESS SPECIFIED (IN DAC)

DRAWN BY		DATE 6/3	WAVETEK
CHECKED BY:			Wavetek Scientific, Inc.
ENG APPVL.		6/5/84	10 Volvo Drive
MFG APPVL.		6/5/84	Rockleigh, NJ 07647

UNLESS OTHERWISE SPECIFIED ALL DIMENSIONS ARE IN INCHES AFTER FINISHING AND TOLERANCES ARE: .XXX ± .XX ± X/X ± 1/64 ∠° ± 1°

TITLE: SCHEMATIC A TO D CONVERTER- SAMPLE & HOLD

SIZE D | DRAWING NO. 03-004-6455 | REV F | SCALE ~ | SHEET 2 OF 3

03-004-6455 REV F

LTR	ECO NO.	CHANGED BY	APPV'D BY	DATE
M	1156			
N	1183			
P	1220	JP 8-5-81		
R	1255	TC 9-3-81		

LTR	ECO NO.	CHANGED BY	APPV'D BY	
A	RELEASED		PHH	JH
B	421		PHH	JH
C	460		PHH	JH
D	473		PHH	JH
E	508	PHH 5/76	PHH	JH
F	545	KDD 5/76	KDD	JH
G	580	TH 7/1/76		
H	815	TH 8/1/77		
J	934	TH 6/78		
K	1047	M. McMINN		
L	1091	FZ		

78 9 REQ TP2 - TP10

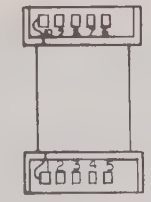
79 19 REQ

76 8 REQ UNDER AR1 - AR8

AFTER TESTING OP-AMPS, HARD WIRE AS SHOWN (SOLDER SIDE OF BOARD, E1 & E2)

THE FOLLOWING CAPACITORS (NOM. VALUES) SHOULD BE INSTALLED DURING ASSEMBLY C200 - 213, 215, 218, 216, 219 (MAYBE SELECTED IN TEST IF REQD)

PIN LAYOUT
RELAYS K1 - K7



PIN LAYOUT
RELAYS K8 - K26

STAMP USEABLE REVISION LTR. ON DWG. NO. 004-6460-00(L)

SHEETS 2-7 ARE "A" SIZE, L.M.

DRAWN BY FH	DATE 7/22	WAVETEK
CHECKED BY		Wavetek Scientific, Inc
ENG APPVL		10 Volvo Drive
MFG APPVL		Rockleigh, NJ 07647

UNLESS OTHERWISE SPECIFIED ALL DIMENSIONS ARE IN INCHES AFTER FINISHING AND TOLERANCES ARE .XXX ± .XX ± X/x ± 1/64 ∠° ± 1°

TITLE: ASSEMBLY LOW PASS FILTER

SIZE D | 02 | DRAWING NO. 004-6460 | SCALE 2/1 | R

WAVETEK®

TITLE	LIST OF MATERIAL	REV
ASSEMBLY LOW PASS FILTER	02 004-6460	R

RELEASE AUTHORITY	CHK BY	ENG	ASSY SIZE	DATE	SHEET
	DWA		D	1/76	2 OF 7

	PART NO.	QTY	DESCRIPTION	REMARKS
1	01-320-6460	1	LOW PASS FILTER, P C B	
2	175-1501	7	RELAY, REED, SPST	K1-K7
3	175-1503	21	RELAY, REED, 4PST	K8-K28
4				
5	120-1012	1	VOLTAGE FOLLOWER (LM310)	AR9
6	150-2470	2	COIL, 4.7 uh	L1, L2
7	353-1604	1	SOCKET, 16 PIN	J12
7A	368-5002	1	INSULATOR	
8	132-0457	39	DIODE, (IN457A)	CR1-CR32 CR34-CR40
9	122-7406	3	HEX INVERTER	U4, U8, U9
10	120-3339	1	QUAD ANAL VOLT COMP (LM339)	U10
11	125-0107	1	MULTVIB (74LS123)	U11
12	122-7437	1	QUAD 2 IN NAND BUFFER	U12
13	113-9000	1	RESISTOR, 900K, 1/8 W, 1%	R1
14	112-9000	1	RESISTOR, 90K, 1/8 W, 1%	R2
15	112-1000	1	RESISTOR, 10K, 1/8 W, 1%	R3
16	116-3101	3	RESISTOR, 10K, 1/4 W, 5%	R4, R49, R108

WAVETEK

TITLE	LIST OF MATERIAL	REV
ASSEMBLY LOW PASS FILTER	02 004-6460	R

RELEASE AUTHORITY	CHK BY	ENG	ASSY SIZE	DATE	SHEET	OF
	DWK		D	1/76	3	7

ITEM	PART NO.	QTY	DESCRIPTION	REMARKS
17	116-4101	2	RESISTOR, 100K, 1/4W, 5%	R5, R6
18	112-6490	4	RESISTOR, 64.9K, 1/8W, 1%	R7, R18, R27, R42
19	116-1101	3	RESISTOR, 100Ω, 1/4W, 5%	R9, R50, R110
20	118-4202	2	RESISTOR, VHRI, 200K	R8, R19
21	111-9090	2	RESISTOR, 9.09K, 1/8W, 1%	R10, R21
22	118-1101	1	RESISTOR, VARI, 100Ω	R11
23	111-1000	10	RESISTOR, 1K, 1/8W, 1%	R12, R22, R23, R31, R32, R36, R39, R45, R89, R90
24	111-8870	1	RESISTOR, 8.87K, 1/8W, 1%	R13
25	110-7870	1	RESISTOR, 787Ω, 1/8W, 1%	R14
26	111-3240	1	RESISTOR, 3.24K, 1/8W, 1%	R15
27	112-3400	1	RESISTOR, 34K, 1/8W, 1%	R16
28	114-1000	1	RESISTOR, 1M, 1/8W, 1%	R17
29	110-4320	2	RESISTOR, 432Ω, 1/8W, 1%	R24, R37
30	118-0500	4	RESISTOR, VARI, 50Ω	R26, R33, R40, R46
31	111-1370	2	RESISTOR, 1.37K, 1/8W, 1%	R28, R41
32	118-4201	1	R: VAR CMT 200K 3/8 SQ FM	R43

WAVETEK®

TITLE: ASSEMBLY LOW PASS FILTER

LIST OF MATERIAL: 02 004-6460 REV P

RELEASE AUTHORITY | CHK BY | ENG | ASSY SIZE D | DATE 1/76 | SHEET 4 OF 7

	NO	QTY	DESCRIPTION	REMARKS
33	111-1820	2	RESISTOR, 1.82K, 1/8W, 1%	R34, R47
34	116-2201	2	RESISTOR, 2K, 1/4 W, 5%	R102, R103
35	112-1799	4	RESISTOR, 17.93K, 1/8W, 1%	R51, R54, R69, R72
36	111-7179	4	RESISTOR, 7.179 K, 1/8 W, 1%	R52, R55, R70, R73
37	111-3589	4	RESISTOR, 3.586K, 1/8W, 1%	R53, R56, R71, R74
38	112-1009	4	RESISTOR, 10.03K, 1/8 W, .5%	R57, R60, R75, R78
39	111-4010	4	RESISTOR, 4.010 K, 1/8 W, .5%	R58, R61, R76, R79
40	111-2009	4	RESISTOR, 2.005 K, 1/8 W, .5%	R59, R62, R77, R80
41	111-7719	4	RESISTOR, 7.717K, 1/8 W, .1%	R63, R66, R81, R84
42	111-3089	4	RESISTOR, 3.087K, 1/8 W, .1%	R64, R67, R82, R85
43	111-1549	4	RESISTOR, 1.544K, 1/8 W, .1%	R65, R68, R83, R86
44	116-2511	1	RESISTOR, 5.1K, 1/4W, 5%	R87
45	113-1590	2	RESISTOR, 159 K 1% 1/8 W	R91, R88
46	112-1500	2	RESISTOR, 15 K, 1/8W, 1%	R92, R95
47	110-5230	2	RESISTOR, 523 Ω, 1/8W, 1%	R93, R94
48	116-2101	3	RESISTOR, 1K, 1/4W, 5%	R97, R98, R99
49	116-0101	1	RESISTOR, 10 Ω, 1/4 W, 5%	R96

WAVETEK

TITLE	LIST OF MATERIAL	REV
ASSEMBLY LOW PASS FILTER	02 004-6460	P

RELEASE AUTHORITY	CHK BY	ENGR	MFG	ASSY SIZE	DATE	SHEET
		DRAFT		D	1/76	5 OF 7

	PART NO	QTY	DESCRIPTION	REMARKS
50	116-2301	2	RESISTOR, 3K, 1/4W, 5%	R100, R101
51	118-4203	1	R: VAR CERMET 200K SQ EM 20T	R29
52	116-3471	2	RESISTOR, 47K, 1/4W, 5%	R104, R105
53	116-1151	3	RESISTOR, 150Ω, 1/4W, 5%	R106, R107, R109
54				
55	108-0250	1	CAP, VARI, 2-25 PF	C2
56	108-1200	5	CAP, VARI, 24-200 PF	C3, C83, C86, C87, C90
57				
58	109-6101	2	CAP, 10 uF, 50V, 20%	C12, C106
59	100-3105	19	CAP, FXD MONO .01 +80 -20% 50V	C8, C9, C13, C70, C71, C75, C76, C77, C78, C91, C92, C93, C94, C95, C96, C109, C110, C111, C113
60	101-0050	1	CAP, 5 PF, 10%	C5,
61	104-5100	1	CAP, 1 uF, 1%	C11
62	104-5103	12	CAP, 1 uF, POLY, 100V ±.5%	C22, C26, C30, C34, C38, C42, C46, C50, C54, C58, C62, C66
63	101-0330	1	CAP, 33 PF	C14

WAVETEK®

TITLE: ASSEMBLY LOW PASS FILTER

LIST OF MATERIAL: 02 004-6460 REV R

RELEASE AUTHORITY | CHK BY | ENG | ASSY SIZE D | DATE 1/76 | SHEET 6 OF 7

ITEM	PART NO	QTY	DESCRIPTION	REMARKS
4	104-4103	12	CAP, .1 uF, ±0.5 %	C23, C27, C31, C35, C39, C43, C47, C51, C55, C59, C63, C67
5	104-3106	12	C: FX POLYSTYRENE .014F ± 0.5%	C24, C28, C32, C36, C40, C44, C48, C52, C56, C60, C64, C68
6	101-1910	9	CAP, 910 PF, 1%	C25, C29, C33, C37, C41, C45, C49, C61, C65
7	109-6150	1	CAP, 15 uF, 100V	C72
8	109-5100	2	CAP, 1 uF, 35V, 20%	C73, C74
9	101-0470	4	CAP, 47 PF, 10% (SELECT IN TEST)	C220, C221, C222, C223, C224, C225, C226, C227
70	100-4102	4	C: FXD CER .1uf ±20% 50V	C97, C98, C99, C100
71	109-6100	5	CAP, 10 uF, 20V	C101, C102, C103, C104, C105
72	101-0680	12	CAP, 68 PF, 10% (SELECT IN TEST)	C200, C201, C202, C203, C204, C205, C206, C207, C208, C209 C210, C211
73	101-0100	2	CAP, 10 PF 10%	C214, C217 (MAY BE SELECTED)
74	101-1820	4	CAP, 820 PF 5%	C41, C53, C57, C69
75				

WAVETEK

TITLE: ASSEMBLY LOW PASS FILTEK

LIST OF MATERIAL: 02 004-6460 REV R

RELEASE AUTHORITY | CHK BY | DRAWING | ASSY SIZE D | DATE 1/76 | SHEET 7 OF 7

ITEM	PART NO	QTY	DESCRIPTION	REMARKS
76	353-0801	8	SOCKET, 8 PIN, TO-5	
77				
78	354-0003	9	WIRE WRAP PIN	
79	354-0006	19	TERMINAL (G.E. PIN)	
80	116-1221	1	R: FXD COMP, 220 OHM, 1/4W, 5%	R111
81	120-1014	2	OP AMP LIN (LF356)	AR3, AR6
82	120-1021	6	OP AMP LIN HA5115	AR1, -2, -4, -5, -7, -8
83	101-0180	1	C: 18 pf 10%	C10
84	101-0220	2	C: 22pf 10%	C212, C213 (MAYBE SEL IN TEST)
	03-004-6460	REF	SCHEMATIC-LOW PASS FILTER	
85	101-0080	2	C: 8pf 10%	C215, C218
86	101-0120	1	C: 12pf 10%	C216
87	101-0150	1	C: 15pf 10%	C219 (MAYBE SEL IN TEST)

LTR	ECO NO.	CHANGED BY	APPRVD BY	DATE
A	RELEASE			
B	410			
C	461			
D	505			
E	515			
F	580			
G	815	T.H. 8-1-77		
H	1156	TE 2-6-81		
J	1183	TE 2-6-81		
K	1265	TE 9-3-81		

LOCATED ON FRONT PANEL

INPUT PROTECTION ± 18

DC OFFSET ADJUST

DC RAC COUPLING CONTROL

DC OFFSET ADJUST

+15VDC

-15VDC

+28VDC

FINE SENSITIVITY
1db STEP ATTENUATOR SWITCH (S28)
(LOCATED ON FRONT PANEL)

ATTENUATOR SENSE OUTPUTS

ATTENUATOR 0DB

ATT FREQ COMPENSATION

7406

OVERLOAD
(LOCATED ON FRONT PANEL)

TO P13-4

EXTERNAL SAMPLING (LOCATED ON FRONT PANEL)

CONTINUOUS CONDITION LINE

10 SEC. MONOS

DS9 LOW IN PUT
(LOCATED ON FRONT PANEL)

U11
74123

CONTINUOUS CONDITION 1.11.13

OVER UNDER VOLTAGE DETECTOR

U10
LM339

NORMALLY HI

CONNECTED TO Y

CONNECTED TO POINT TH10

LOCATED ON FRONT PANEL

S27
COARSE SENSITIVITY

S29
ANALYSIS RANGE

P12

15	OVLD
1	OLLINH
2	SENS0
3	SENS1
4	SENS2
5	SENS3
6	SENS4
7	SENS5

ANALOG GRD

+5VDC

DIGITAL GRD

C71 .01µf

SENSITIVITY	K1	K2	K3	K4	K5	K6	K7	
+20			ON			ON		
+10			ON		ON			
0		ON				ON		
-10		ON			ON			
-20	ON					ON		
-30	ON				ON			
-40	ON			ON		ON		
-50	ON			ON	ON			
-60	ON			ON				

COMPONENTS WITH DESIGNATIONS 200 or ABOVE MAYBE SELECTED IN TEST

DRAWN BY:	DATE 8/76	WAVETEK	
CHECKED BY:		Wavetek Scientific, Inc.	
ENG. APPVL.	11/76	10 Volvo Drive	
MFG APPVL.	12-9-81	Rockleigh, NJ 07647	
UNLESS OTHERWISE SPECIFIED ALL DIMENSIONS ARE IN INCHES AFTER FINISHING AND TOLERANCES ARE: .XXX ± .XX ± X/x ± 1/64 ∠° ± 1°		TITLE: SCHEMATIC LOW PASS FILTER	
		SIZE D	DRAWING NO. 03-004-6460 REV K
		SCALE ~	SHEET 1 OF 2

70

LTR	ECO NO.	CHANGED BY	APPV'D BY	DATE

SEE SHEET 1 FOR REVISIONS

FOR VALUES OF RESISTORS R51 THRU R86 SEE TABLE BELOW

SHEET 1-V

R23 1K, R24 432, R31 1K, R26 GAIN ADJ 50, R28 1.37K, 11.7 DB, 3 DB

R32 1K, R33 GAIN ADJ 50, R34 1.82, R36 1K, R37 432

AR3, AR4, AR5, AR6

C91 .01, C110 .01, C92 .01, C111 .01, C93 .01, C75 .01, C94 .01, C76 .01

C214 12pf 10% NOM, C215 8pf 10% NOM, C216 12pf 10% NOM, C217

-15V, +15V

TP5, TP6, TP7, TP8

D.C. OFF (+15V)

HARD WIRE CONNECTION ON P.C.B.

R27 649 K, R29 200K

C109 .01, R50 100, R87 5.1 K, AR9, R49 10 K, R108 10K Ω, C70 .01, R110 100, LM310, LPF OUT, +15VDC

R111 100, S/H, +28V

C72 15 uf 100V

R42 649 K (+15V), R43 200K OFFSET CONTROL, R39 1K, R40 50, R41 1.37K, AR7, TP9

C95 .01, C218 8pf 10% NOM, C77 .01

R45 1K, GAIN ADJUST R46 50, R47 1.82K, AR8, TP10

C96 .01, C219 15pf 10% NOM, C78 .01

R51 R52 R53 R54 R55 R56 R57 R58 R59 R60 R61 R62 R63 R64 R65 R66 R67 R68 R69 R70 R71 R72 R73 R74 R75 R76 R77 R78 R79 R80 R81 R82 R83 R84 R85 R86

C22 1.0, C23 0.1, C24 .01, C25 910pf, C220
C26 1.0, C27 0.1, C28 .01, C29 910pf, C221
C30 1.0, C31 0.1, C32 .01, C33 910pf, C223
C34 1.0, C35 0.1, C36 .01, C37 910pf, C222
C38 1.0, C39 0.1, C40 .01, C41 820pf, C83 24-200pf
C42 1.0, C43 0.1, C44 .01, C45 910pf, C224
C46 1.0, C47 0.1, C48 .01, C49 910pf, C225
C80 1.0, C81 0.1, C82 .01, C85 820pf, C86 24-200pf
C54 1.0, C55 0.1, C56 .01, C57 820pf, C87 24-200pf
C58 1.0, C59 0.1, C60 .01, C61 910pf, C226
C62 1.0, C63 0.1, C64 .01, C65 910pf, C227
C66 1.0, C67 0.1, C68 .01, C69 820pf, C90 24-200pf

CR12 CR13 CR14 CR15 CR16 CR17 CR18 CR19 CR20 CR21 CR22 CR23 CR24 CR25 CR26 CR27 CR28 CR29 CR30 CR31 CR32

K8 K9 K10 K11 K12 K13 K14 K15 K16 K17 K18 K19 K20 K21 K22 K23 K24 K25 K26 K27 K28

+28V

"X10K"
"X1K"
"X100"
"X10"
"10"
"5"
"2"

U8 U9

+15VDC, C73 1uf, -15VDC, C74 1uf, A ANALOG GRD

P12

8	AR2 LINE	
9	AR5 LINE	
10	AR10 LINE	
11	ARA	[X10]
12	ARB	[X100]
13	ARC	[X1000]
14	ARD	[X10,000]

+5V → +5VDC

DIG GRD → DIG GRD

COMPONENT NO.	VALUE		
R51, R54, R69, R72	17.93K	1/8W	1%
R52, R55, R70, R73	7.172K	1/8W	1%
R53, R56, R71, R74	3.586K	1/8W	1%
R57, R60, R75, R78	10.03K	1/8W	0.5%
R58, R61, R76, R79	4.010K	1/8W	0.5%
R59, R62, R77, R80	2.005K	1/8W	0.5%
R63, R66, R81, R84	7.717K	1/8W	0.1%
R64, R67, R82, R85	3.087K	1/8W	0.1%
R65, R68, R83, R86	1.544K	1/8W	0.1%

COMPONENTS WITH DESIGNATIONS 200 or ABOVE MAYBE SELECTED IN TEST

DRAWN BY:		DATE 9/11/X
CHECKED BY:		
ENG. APPVL.		
MFG. APPVL.		

UNLESS OTHERWISE SPECIFIED ALL DIMENSIONS ARE IN INCHES AFTER FINISHING AND TOLERANCES ARE: .XXX ±, .XX ±, X/X ± 1/64, ∠ ± 1°

WAVETEK
Wavetek Scientific, Inc.
10 Volvo Drive
Rockleigh, NJ 07647

TITLE: SCHEMATIC LOW PASS FILTER

SIZE D | DRAWING NO. 03-004-6460 | REV K | SCALE ~ | SHEET 2 OF 2

03-004-6460

LTR	ECO NO	CHANGED BY	APPV'D BY	DATE
A	RELEASE			7/27/77
B	866	Paul 7/8/77		12/15/77
C	896	12578		1.15.78
D	[illegible]	[illegible]		7/9/78
E	1011	Paul [illegible]		3/1/80
F	1013	[illegible]		3/22/79
G	1123	[illegible]		3/1/80
H	1125	Paul [illegible]		1/1/80
J	1132	[illegible]		3/80
K	1138	5218 SMM		[illegible]
L	1151	TR 11-17-81		1/19/82
M	1353	NP 8/4/82		9/16/82

VIEW D-D

WHITE WIRE

JUMPER CONTACTS ON BOTH SIDES OF S1 WITH 18 GA. TINNED BUSS WIRE, THEN CONNECT TO P.C. BOARD

MOUNT RS02 ON SOLDER SIDE OF P.C.B.

MOUNT CR2 WITH WIDE PLATE TOWARDS R191

8 PLACES

5 PLACES

FREQ ADJ

HV ADJ

ORTH

AST G

HORIZ STATIC

VERT

S1 ON/OFF

R38 FOCUS

R39 ASTIG

R40 VERT SEP

R41 BIAS

T1

ORIENTATION DOT

TP1

J37

R141 Y POS

R142 X POS

R143 Y GAIN

R144 X GAIN

R145 Z GAIN

INSTALL FROM SOLDER SIDE

Q101, Q102, Q103

HEAT SINK, SHIELD

SW A-A

Q104, Q105, Q106

HEAT SINK, SHIELD

MICA WSHR (SUPPLIED IN KIT)

COMPRESSION WSHR (SUPPLIED IN KIT)

VIEW B-B

JUMPER FROM 'W' CONNECTION TEST JACK AS SHOWN WITH 18 GA WIRE

SCREW LOCK WSHR ASSY

INT TOOTH LOCK WASHER

NUT

CUT OFF STUD AS CLOSE AS POSSIBLE, 1/8" OR LESS

VIEW C-C

JUMPER WITH 22 GA WIRE AS SHOWN (GROUND CONNECTIONS) (2 PLACES)

3/4 HIGH MAX

STAMP LATEST REVISION LEVEL

INSTALL BEAD ON BASE LEAD OF QS3

SHEETS 1 & 2 ARE D SIZE, SHTS 3 THRU 9 ARE A SIZE LTR

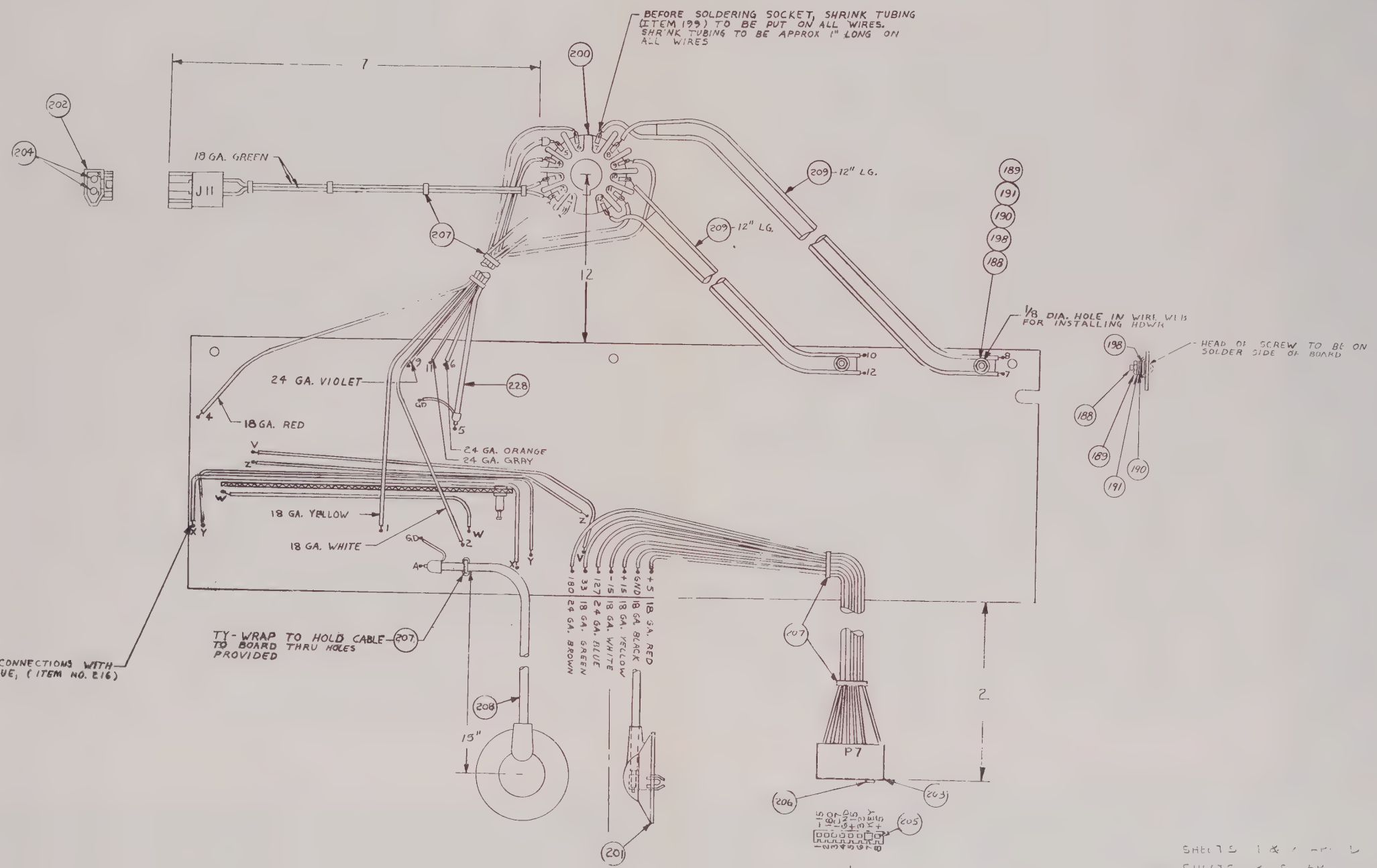
WAVETEK
Wavetek Scientific, Inc
10 Volvo Drive
Rockleigh, NJ 07647

UNLESS OTHERWISE SPECIFIED ALL DIMENSIONS ARE IN INCHES AFTER FINISHING AND TOLERANCES ARE

TITLE: ASSEMBLY CRT, P.C.B.

SIZE D | DRAWING NO 02-004-6466 | REV M | SCALE 2/1 | SHEET 1 OF 9

LTR	ECO NO.	CHANGED BY	APPV'D BY	DATE
SEE SHEET 1 FOR REVISIONS				



SHEETS 1 & 2 ARE D SIZE
SHEETS 3 & 4 ARE C SIZE W/M

DRAWN BY: T.L.	DATE: 7/11	WAVETEK Wavetek Scientific, Inc. 10 Volvo Drive Rockleigh, NJ 07647
CHECKED BY:		
ENG APPVL:		
MFG APPVL:		
UNLESS OTHERWISE SPECIFIED ALL DIMENSIONS ARE IN INCHES AFTER FINISHING AND TOLERANCES ARE: .XXX ± .XX ± X/x ± 1/64 ∠ ± 1°		TITLE: ASSY, PCB, CRT
		SIZE: D — DRAWING NO: 02 004-6466 — REV: M
		SCALE: 1/1 — SHEET 2 OF 5

WAVETEK

TITLE: ASSEMBLY, CRT PCB

LIST OF MATERIAL: 02 004-6466 REV M

RELEASE AUTHORITY	CHK BY	ENG	MFG	ASSY SIZE	DATE	SHEET
				D	8-10-77	3 OF 9

ITEM	PART NO	QTY	DESCRIPTION	REMARKS
1	01-320-6466	1	ARTWORK & DRILLING CRT PCB	
2				
3	05-307-0918	1	SHIELD - HEATSINK	
4				
5	03-004-6466	REF	SCHEMATIC - CRT BOARD	4 SHEETS
6				
7	354-0003	8	WIRE WRAP PIN	
8				
9	352-0102	2	PLUG, RIGHT ANGLE	J14
10				
11	354-0006	5	CONN, TERM	L1, G, TP GND, ILUM
12				
13	367-0400	4	HEAT SINK	
14				
15	354-0005	1	CONNECTOR, 34 POS	J37
16				
17	354-0019	1	CONNECTOR, 6 POS	J53
18				
19	353-0110	1	SOCKET, TEST JACK, INSUL	TP1
20				
21	177-3016	1	XFMR: HIGH VOLTAGE 512/111	T1
22				
23				
24	150-9680	5	L: COIL 6.8Uhy ±10%	L2, L3, L4, L5, L6
25	150-2100	1	L: COIL 1 MHY ±10%	L7
26	159-0001	1	L: FERROXCUBE BEAD	L8 (ON BASE LEAD OF Q53)
27	122-7406	2	U: HEX INVERT DRIVER 7406	U1, U3
28	128-2331	1	U: PULL UP NET 3.3K, 16 PIN	U2
29	120-2458	4	U: DL LIN OP-AMP, MC1458	U5, U7, U8, U9,
30	120-1012	2	U: VOLTAGE FOLLOWER LM310	U10, U11
31				
32				
33				

47

WAVETEK®

ASSEMBLY, CRT PCB

LIST OF MATERIAL 02 004-6466 M

UNLESS OTHERWISE SPECIFIED	CHG BY	ENG	MFG	ASSY SIZE D	DATE 8-11-77	SHEET 4 OF 9

	PART NO.	QTY	DESCRIPTION	REMARKS
34	120-0999	1	Q: REG PWM SG3524	U12
35	137-4003	5	Q: SIL PNP MM4003	Q1, Q41, Q43, Q48, Q50
36	135-3003	4	Q: SIL NPN MM3003	Q40, Q42, Q47, Q49
37	134-0065	1	Q: SIL NPN MATCHED PAIR 2N3565	Q107, Q108
38	135-6521	7	Q: SIL NPN MPS6521	Q37, Q38, Q39, Q44, Q45, Q46, Q100
39	135-4411	3	Q: SIL NPN D44C11	Q101, Q102, Q103
40	134-2222	4	Q: SIL NPN 2N2222	Q13, Q14, Q25, Q26
41	136-4122	22	Q: SIL PNP 2N4122	Q15-Q24, Q27-Q36, Q53, Q54
42	138-0660	2	Q: FET N-CHAN MEM660	Q51, Q52
43	135-0340	2	Q: SIL NPN MJE-340	Q104, Q106 W/MTG KIT
44	137-0350	1	Q: SIL PNP MJE 350	Q105 W/MTG KIT
45	138-5012	2	Q: QUAD ANAL SWITCH IH5012	U4, U6
46	135-3001	1	Q: SIL NPN MM3001	Q2
47				
48				
49	108-1200	1	C: VAR MICA 24-200 PF 175V	C82
50	103-0180	2	C: VAR MICA 3.5-18 PF	C75, C76
51				
52				
53				
54	105-4100	2	C: FX PLSTR .1UF, 600V, 10%	C1, C519
55	106-2270	3	C: FX CRM MLD, 2700PF, 200V 10%	C2, C3, C505
56	100-2100	2	C: FX CER 1000 PF 1KV +80-20%	C504, C507
57	101-1910	1	C: FX CER DP 910 PF, 500V, 1%	C66
58	100-4102	15	C: FX MONO .1UF ±20% 50V	C33-C35, C37, C38, C40, C41, C45, C46, C68, C31, C517, C518, C32, C36
59				
60	100-3100	3	C: FX CER .01UF, GMV 1KV	C508, C509, C510
61	100-3102	1	C: FX CER .01UF, 20%, 3KV	C512
62	105-3220	1	C: FX PLSTR, .022UF, 2KV	C513
63	105-3680	1	C: FX PLSTR, .068UF, 2KV	C514
64	100-3103	1	C: FX MONO .01UF, +80-20%, 50V	C520
65	109-4100	12	C: FX TANT. .10 UF, 20%	C49, C58, C59, C61, C69, C70, C71, C72, C73, C78, C79, C80
66				

WAVETEK®

TITLE: ASSEMBLY CRT PCB

LIST OF MATERIAL: 02 004-6466 | REV: M

RELEASE AUTHORITY	CHK BY	ENG	MFG	ASSY SIZE	DATE	SHEET
				D	8-11-77	6 OF 9

	PART NO.	QTY	DESCRIPTION	REMARKS
100				
101				
102				
103				
104				
105				
106	116-2201	1	R: 2K NOM SELECT IN TEST	R497
107	116-1561	3	R: FX COMP, 560 OHM, 5%, 1/4W	R1, R177, R200
108	116-2151	2	1.5K	R524, R525
109	116-2181	7	1.8K	R2, R134, R138, R157, R161, R508, R528
110	116-1181	1	180 OHM	R510
111	116-4121	1	120K	R3
112	116-0472	1	47 OHM	R521
113	116-2201	2	2K	R4, R531
114	116-3821	1	82K	R523
115	116-2101	7	1K	R5, R150, R151, R164, R165, R507, R526
116	116-2301	1	3K	R215
117	116-3101	3	10K	R503, R530, R527
118	116-1391	2	390 OHM	R126, R149
119	116-3151	1	15K	R506
120	116-2681	9	6.8K	R130, 153, 185, 188, 190, 199, 203, 206, 502
121	116-4181	4	180K	R133, 137, 163, 156
122	116-1101	10	100 OHM	R129, 152, 193, 194, 195, 196, 532, 509, 514, 499
123	116-5151	1	1.5M	R516
124	116-3471	4	47K	R131, 136, 159, 154
125	116-1821	1	820 OHM	R511
126	116-1221	4	220 OHM	R83, R121, R135, R139
127	116-4101	1	100K	R529
128	116-2511	2	5.1K, , 1/4W	R504, R505
129	116-3304	2	30K , 2W	R519, R520
130	116-9102	2	R: FX COMP, 1 OHM , 1/2W	R513, R512
131	116-1151	1	R: FX COMP, 150 OHM, 5%, 1/4W	R46
132	110-7871	10	R: FX MFLM, 787 OHM, 1%, 1/10W	R52, 53, 54, 55, 56, 90, 91, 92, 93, 94.

77

WAVETEK®

TITLE	LIST OF MATERIAL	REV
ASSEMBLY CRT PCB	02 004-6466	M

RELEASE AUTHORITY	CHK BY	ENG	MFG	ASSY SIZE	DATE	SHEET
				D	8-12-	7 OF 9

	PART NO	QTY	DESCRIPTION	REMARKS
133	110-8251	10	R: FX MFLM, 825 OHM, 1%, 1/10W	R57–R61, R95–R99
134	116-0101	2	R: FX COMP., 10 OHM, 5%, 1/4W	R62, R100
135	110-2001	6	R: FX MFLM, 200 OHM, 1%, 1/10W	R63, 64, 101, 102, 172, 179
136	110-5111	2	511 OHM,	R65, R103
137	110-1691	4	169 OHM,	R66, 68, 104, 106
138	111-1181	2	1.18K,	R67, R105
139	111-1501	2	1.5K,	R69, R107
140	110-1001	12	100 OHM, 1/10 W	R70, 72, 74, 76, 78, 80, 108, 110, 112, 114,
141				R116, R118
142	111-3090	2	3.09K 1/8W	R71, R109
143	111-6341	10	6.34K, 1/10W	R73, 111, 174, 178, 184, 186, 187, 189,
144				R201, 202
145	112-1271	7	12.7K, 1/10 W	R75, 113, 173, 183, 198, 209, 210
146	112-2551	5	R: FX MFLM, 25.5K, 1/10 W	R77, 115, 182, 192, 197
147	112-4991	2	R: FX COMP, 49.9K, 1% 1/10W	R79, R117
148	116-1271	2	270 OHM, 5%, 1/4W	R81, R119
149	116-0301	2	30. OHM	R82, R120
150	116-1331	4	330 OHM	R84, 122, 216, 217
151	116-1301	2	300 OHM	R158, R162
152	116-2391	2	3.9K	R124 R147
153	116-2561	5	5.6K	R125, R148, R176, R181, R207
154	116-1681	4	680 OHM	R127, R128, , R213, R522
155	116-3331	1	33K	R167
156	116-1471	1	470 OHM	R166
157	116-4151	1	150K	R168
158	116-2471	9	4.7K	R132, 140, 160, 155, 169, 170, 204, 205, 214
159	116-3721	3	22K	R191, R500, R501
160	116-2271	3	R: FX COMP, 2.7K, 5%, 1/4W	R208, R211, R212
161	112-1821	1	R: FX MFLM, 18.2K, 1%, 1/10W	R175
162	112-1001	1	R: FX MFLM, 10K, 1% 1/10W	R171
163	112-2211	1	R: FX MFLM, 22.1K, 1%, 1/10W	R180
164				
165				

WAVETEK®

TITLE: ASSEMBLY CRT PCB

LIST OF MATERIAL: 02 004-6466 | REV: M

RELEASE AUTHORITY | CHK BY | ENG | MFG | ASSY SIZE: D | DATE: 8-12-77 | SHEET 8 OF 9

	PART NO.	QTY	DESCRIPTION	REMARKS
166				
167				
168				
169				
170	115-1003	2	R: FX HI-VOLT, 10M, 5%, 1/2W	FL 1/2, 10M ± 5% ← KDI R517, R518
171	114-6003	2	R: FX HI-VOLT, 6M, 5%, 1/2W	FL 1/2, 6M ± 5% ← PYROFILM R498, R515
172	118-3105	1	R: VAR, COMP, 10K, 1/8 SFT, 2/SW MP	S1
173	118-1500	2	R: CMT, 500 OHM, 3/8 SQ EM	R123, R146
174	118-2207	5	R: COMP, 2K, 1/4 SFT, MD PT	R142, R143, R144, R145, R141
175	118-5257	1	R: 2.5M, 1/8 SFT MD PT	R38
176	118-3107	2	R: 10K, 1/8 SFT MD PT	R39, R40
177	118-4501	1	R: CMT, 500K, 3/8 SQ EM	R41
178	118-2501	3	R: CMT, 5K, 3/8 SQ EM	R45, R533, R42
179	118-4102	2	R: CMT, 100K, 3/8 SQ EM	R43, R44
180	118-1100	10	R: VAR, CMT, 100 OHM, 1/4 RND	R47, 48, 49, 50, 51, 85, 86, 87, 88, 89
181				
182				
183	376-2109	2	SPCR: NYLON SNAP BUTTON (MBI-156)	
184				
185	368-5004	3	INSUL: MICA TO 220	
186	388-4060	3	WASHER: FLT NYL NO.6	
187	376-2105	2	SPCR: NYL 1/4D x 3/16L, .171 I.D.	
188	380-4062	5	SCREW: ST CD SL 4-40 x 3/8 PH	
189	387-4080	5	NUT: HEX ST CD 4-40 x 1/4 AF	
190	388-0040	2	WASHER: FLAT STL CAD #4	
191	388-1041	5	WASHER: LOCK EXT #4	
192	387-6030	5	NUT: HX ST CD 6-32 x 1/4 AF	
193	388-1061	5	WASHER: EXT LK STL CD #6	
194	389-9002	1	SPADE BOLT: ST CD 6-32 x 3/4	
195	388-0060	4	WASHER: FLAT NO.6	
196	380-6061	4	M SCREW: ST CD SL 6-32 x 3/8 PH	
197	388-3060	1	WASHER: FLT. NYL. NO.6 1/16 THICK	
198	388-3040	2	WASHER: FLT NYL #4 1/4D x 1/8 THICK	

WAVETEK®

TITLE: ASSEMBLY CRT PCB

LIST OF MATERIAL: 02 004 - 6466 | REV: M

RELEASE AUTHORITY	CHK BY	ENG	MFG	ASSY SIZE	DATE	SHEET
				D	8-12-77	9 OF 9

ITEM	PART NO.	QTY	DESCRIPTION	REMARKS
199	378-5540	12"	SHRINK TUBING PLYFIN BLK 1/4"	
200	353-1200	1	SOCKET - CRT	
201	351-4000	1	CONN: ANODE, HV	
202	351-0201	1	CONN: CABLE 2 POS PLUG (MOLEX)	J11
203	353-0802	1	SOCKET: SIL 8 POS (MOLEX)	P7
204	354-0013	2	CONN: TERM PIN .093 MALE (MOLEX)	
205	354-0012	7	CONN: CRIMP (MOLEX KK)	
206	370-0302	1	KEY: POLAR (MOLEX)	
207	377-4001	14	TIE: CABLE NY NAT 3/4 MAX DIA.	
208	009-0003	1	CABLE: SHLD RG58 1PT 16"	
209	378-4014	25"	CABLE: TWN LD 300 OHM, 20 AWG/CW	
210	378-4006	9"	CABLE: TWISTED PAIR WHT/BLK	
211				
212				
213				
214	378-1504	9 3/4"	WIRE: 20 AWG, STR, BLACK	
215				
216	378-1564	38"	WIRE: 20 AWG STR BLUE	
217	378-1444	14"	WIRE: 18 AWG STR GREEN	
218	378-1454	24"	18 YELLOW	
219	378-1424	24"	18 RED	
220	378-1494	24"	18 WHITE	
221	378-1404	10"	18 BLACK	
222	378-1774	14"	24 VIOLET	
223	378-1784	14"	24 GRAY	
224	378-1734	14"	24 ORANGE	
225	378-1764	10"	24 BLUE	
226	378-1714	10"	WIRE: 24 AWG STR BROWN	
227				
228	02-009-0103	1	CABLE ASSY, RG-174	
229				
230				
231				

FORM NO 304

06

LTR	ECO NO.	CHANGED BY	APPV'D BY	DATE
A	RELEASE			9/19/77
B	866			10/12/77
C	1123			5/1/78
D	1129			6/1/80

+15V
L3 3.3uh
C27 10uF 20V
L5 3.3uh
C29 10uF 20V
L6 6.8uh
C30 10uF 20V
-15V
L2 6.8uh
C26 10uF 20V
L4 3.3uh
C28 10uF 20V
+33V
L7 1mh
R507 1K
C503 15 uF 100V
CR102 IN4937
R508 1.8K
U12 SG3524
REFERENCE REGULATOR
FLIP - FLOP
OSC.
NOR
NOR
COMPARATOR
ERROR AMP
CURRENT LIMIT
R497 2K
FREQ. ADJ
R533 5K
.0047 uF C501
15K R506
R505 5K
HI VOLT ADJUST
R42 5.1K
R504 5.1K
C500 .0047 uF
C502 470 pF
Q102 D44C11
Q103 D44C11
R509 100Ω
R514 100Ω
C504 .001 uF
R511 820Ω
R512 1Ω 1/2W
R513 1/2W 1Ω
R510 180Ω
C505 .0027 uF
TRANSFORMER CASE (GROUNDED)
SHIELD
T1
C508 .01uF 1KV
CR103 DR500
C511 .01uF 220V
GRID 1
CR104 DR500
C512 .01uF 3KV
LR41 500K BIAS
R517 10 MEG
C509 .01 1KV
CR105 DR500
ANODE +1500
CR106 DR500
C513 .022uF 2KV
R518 10 MEG
CR112 IN4003
+127 V
C510 .01 1KV
CR107 DR500
C514 .068 uF 2KV
CR108 DR500
CR109 IN4752 32vZENER
CATHODE 2
R498 6 MEG
TP1
MOUNTED ON SHIELD
R516 1.5 MEG
C507 .001uF 1KV
C506 50PF
R38 2.5MEG
FOCUS
R515 6 MEG
+180 V
R519 30K 2W
R520 30K 2W
Q104 MJE340
CR110 IN457
Q105 MJE350
Q106 MJE340
C519 .1uF 600V
C515 22 PF
R522 680Ω
R521 47Ω
IN751A CR111 5.1V ZENER
C516 22PF
R523 82K
R527 10K
R526 1K
C517 12V .1uF
+15V
R524 1.5K
R525 1.5K
Q107 2N3568
Q108
R528 1.8K
R530 10K
C518 12V .1uF
-15V
R529 100K
1R32 10K
INTENSITY
R531 2K
R145 2K
Z GAIN REAR PANEL
DIM SWEEP (J37-9)
R532 100Ω
+15V
ROTATE
L1
CRT COIL
GD
R45 5K
-15V
J11
D14-172
1 11 6 8 10 7
2 3 5 4 12 9 A
127 V
C1 .1uF 600V
R2 1.8KΩ
R1 560Ω
Q1 MM4003
R3 100K
+5V
C2 .0027 uF
C3 .0027 uF
R166 470Ω
J37-10 (Z MOD)
R4 2K
Q2 MM 3001
R5 1K
R43 100K
ORTH
R44 100K
ASTIG
+33V
R502 6.8K
(PART OF ON/OFF S1)
10K
R503 10K
Q100 MPS652
Q101 D44C11
SCALE ILLUMINATION
CR100 IN966B 16 V ZENER
MOUNTED ON SEPERATE P.C. BOARD
BULB #715
ON/OFF
S1
R46 150Ω
J14
ROTARY SECTION
PUSH (J37-8)
S1
PUSH SECTION

DRAWN BY:		DATE 7/77
CHECKED BY:		
ENG. APPVL.		
MFG. APPVL.		

UNLESS OTHERWISE SPECIFIED ALL DIMENSIONS ARE IN INCHES AFTER FINISHING AND TOLERANCES ARE:
.XXX ±
.XX ±
X/± ± 1/64
∠° ± 1°

WAVETEK
Wavetek Scientific, Inc.
10 Volvo Drive
Rockleigh, NJ 07647

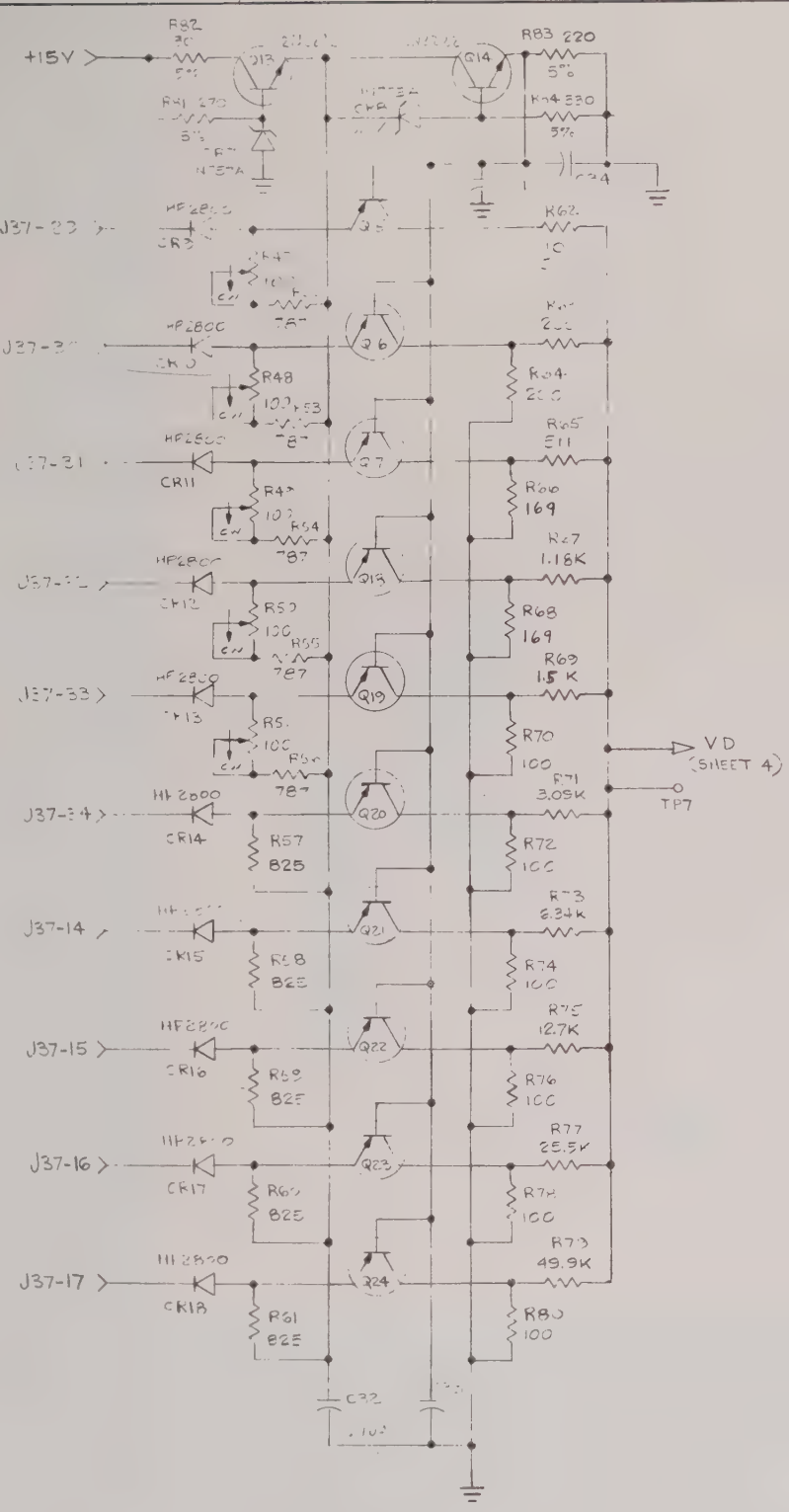
TITLE
SCHEMATIC-CRT BOARD (HIGH VOLTAGE)

SIZE D | DRAWING NO. 03 004-6466 | REV D
SCALE | SHEET | OF 4

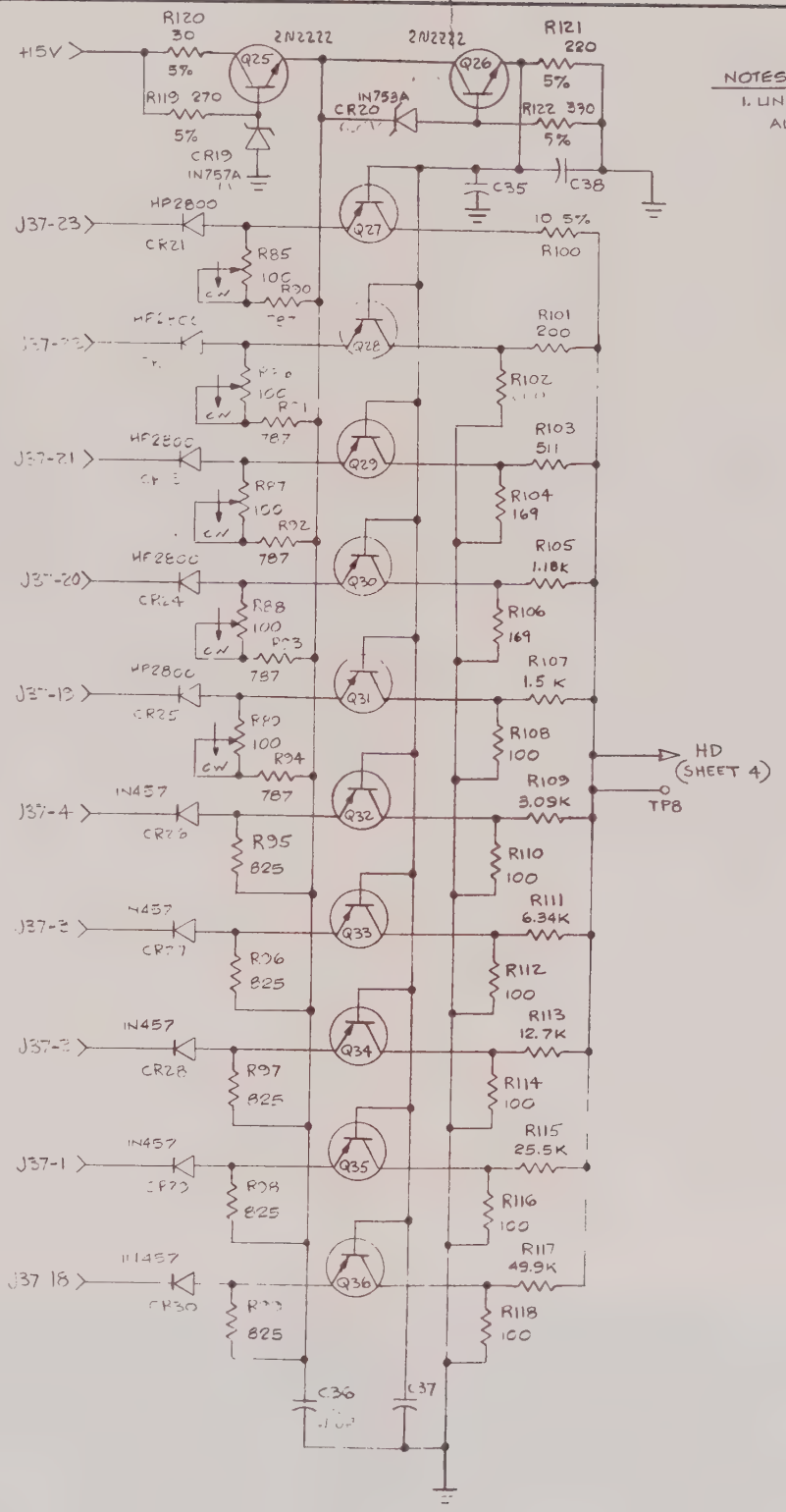
ON ENG SIZE D REV

LTR	ECO NO	CHANGED BY	APPV'D BY	DATE
SEE SHEET 1 FOR REVISIONS				

NOTES:
1. UNLESS OTHERWISE SPECIFIED:
ALL RESISTORS ARE 1/10 W 1%
CAPACITORS ARE -1 MF.
TRANSISTORS ARE TYPE 2N4122.



VERTICAL



HORIZONTAL

WAVETEK
Wavetek Scientific Inc
5808 Volvo Drive
Rockleigh NJ 07647

BOARD
03 004-6466

82

LTR	ECO NO	CHANGED BY	APPV'D BY	DATE
SEE SHEET 1 FOR REVISIONS				

HORIZONTAL

VERTICAL

TP 12 · −15 · STATIC · R123 500Ω · CR31 IN457 · R126 390 · R124 3.9K · R125 5.6K · Q37 MPS6521 · +15

TP 10 · +15

TP 8 · −15 · STATIC · R146 500Ω · CR34 IN457 · R149 390 · R147 3.9K · R148 5.6K · Q44 MPS6521 · +15

TP 7 · +15

+180 · HEAT SINK · MM4003 · Q41 · R135 220 · R134 1.8K · R133 180K · R132 4.7K · C42 5pf · R131 47K · MM3003 · Q40 · R127 680 · R128 680 · MPS6521 · Q39 · C39 39pf · MPS6521 · Q38 · CR32 IN457 · C40 .1uF · C41 .1uF · R129 100 · R130 6.8K · −15V · X POSITION · R142 2K · C520 .01uF NOT USED · CR33 IN457 · R140 4.7K · +15

+180 · MM300 · Q42 · R136 47K · C43 5pf · HEAT SINK · MM4003 · Q43 · R139 220 · R138 1.8K · R137 180K · +15

+180 · HEAT SINK · MM4003 · Q50 · R162 0 · R161 1.8K · R163 180K · MM3003 · Q49 · C48 5pf · R159 47K · R160 4.7K · +15

MPS6521 · Q45 · CR36 IN457 · C44 39pf · C45 .1uF · MPS6521 · Q46 · CR35 IN457 · R155 4.7K · +15

+180 · MM3003 · Q47 · R150 1K · R151 1K · R154 47K · C47 5pf · HEAT SINK · MM4003 · Q48 · R158 300 · R157 1.8K · R156 180K · −15 · R153 6.8K · R152 100 · C46 .1uF · R141 2K (Y POSITION)

X GAIN (SHEET 4) · R144 2K (X GAIN) · R145 1K

Y GAIN (SHEET 4) · R143 2K (Y GAIN) · R164 1K

DRAWN BY: Paul	DATE: 4/78	WAVETEK
CHECKED BY:		Wavetek Scientific, Inc
ENG APPVL:		10 Volvo Drive
MFG APPVL:		Rockleigh, NJ 07647

UNLESS OTHERWISE SPECIFIED ALL DIMENSIONS ARE IN INCHES AFTER FINISHING AND TOLERANCES ARE: .XXX ± .XX ± X/X ± 1/64 ∠° ± 1°

TITLE: SCHEMATIC - CRT BOARD (HORIZ & VERT AMPL)

SIZE D · DRAWING NO. 03 004-6466 · SCALE ~ · SHEET 3 OF 4

LTR	ECO NO.	CHANGED BY	APPV'D BY	DATE

SEE SHEET 1 FOR REVISIONS

J37-11 SPARE
J37-12 SPARE
J37-28 SPARE
J37-8 SPARE

V D (SHEET 2)
HD (SHEET 2)
+15V
VERT SEP
SPARE CONNECTION
SEPERATE
V GAIN 1
V GAIN 2
TIME
SMOOTHING DISABLE
PLOT
B SAMPLE
J37-26
J37-7
J37-27
J37-13
J37-25
J37-24
J37-6

R40 10K
R167 33K
R168 150K
C43 .1uF
R176 5.6K
R174 6.34K 1%
R175 18.2K 1%
C56 5pf
R173 12.7K 1%
R172 200 1%
R171 10K 1%
U4 IH5012
U5 MC1458
TP9
U2 3.3K (TYP)
C52 100PF
C50 100 PF
C51 500 PF
C53 100 PF
C55 100 PF
C54 100 PF
U3 7406
R179 200 1%
R178 6.34K 1%
R180 6.34K 1%
U6 IH5012
R181 5.6K
R182 25.5K 1%
C57 1000 pf
R183 12.7K 1%
R207 5.6K
U7 MC1458
R192 25.5K 1%
C63 5pf
R131 22K
U6 IH5012
R177 560
R195 100
R134 1K
C61 .1uF
R199 100
C58 .1 uF
R184 6.34K 1%
R188 6.8K
U8 MC1458
R185 6.8K
R186 6.34K 1%
C60 5 pf
R193 100
U6 IH5012
R213 68Ω
R212 2.7K
2N4122 Q53
2N4122 Q54
C81 100 PF
R216 220Ω
R215 3.0K
R214 4.7K
R217 33Ω
C80 .1uF
R169 4.7K
R170 4.7K
+5
+15
-15

R204 4.7K
R205 4.7K
C68 .1uF
C69 .1uF
Q51 MEM660
R208 2.7K
U10 LM310N
C70 .1uF
R209 12.7K 1%
R206 6.8K
U9 MC1458
C79 .1 uF
C72 .1 uF
C74 330 PF
C75 3.5-18 pf
Q52 MEM660
R211 2.7K
U11 LM310N
C71 .1uF
R210 12.7K 1%
U6 IH5012
C82 24-200 PF
C66 910 pf
C76 3.5-18 pf
C77 330 PF
C73 .1uF
R200 560
R201 6.34K 1%
C67 5 PF
R202 6.34K 1%
R203 6.8K
U9 MC1458
TP10
C64 5 PF
R197 25.5K 1%
R198 12.7K 1%
R199 6.8K
U7 MC1458
R196 100

J53-3
Y GAIN (SHEET 3)
J53-4
J53-6
X GAIN (SHEET 3)
J53-5
J53-1

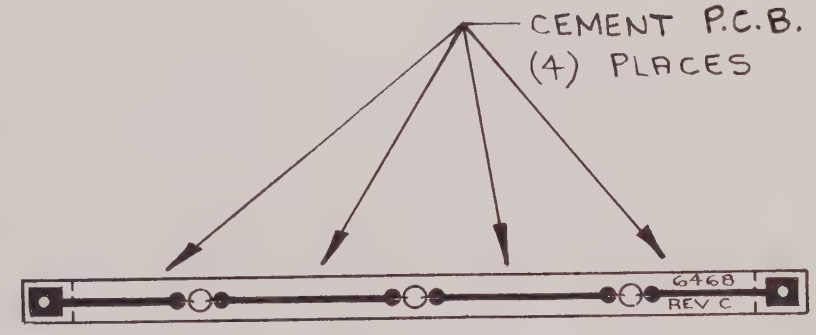
DRAWN BY: Paul	DATE 4/76	WAVETEK
CHECKED BY:		Wavetek Scientific, Inc.
ENG. APPVL.		10 Volvo Drive
MFG. APPVL.		Rockleigh, NJ 07647

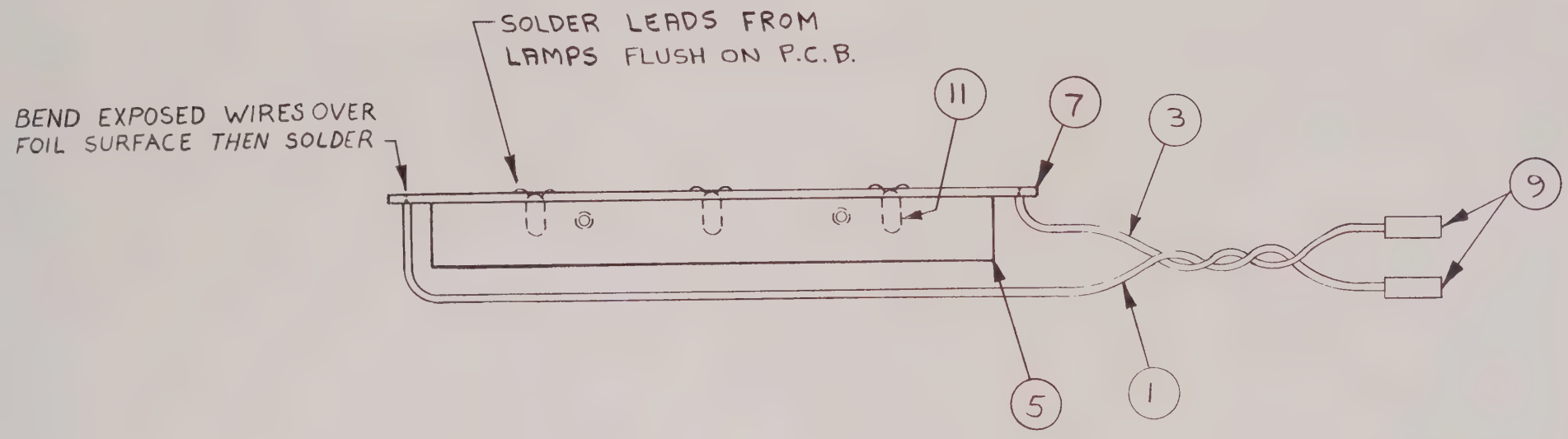
UNLESS OTHERWISE SPECIFIED ALL DIMENSIONS ARE IN INCHES AFTER FINISHING AND TOLERANCES ARE: .XXX ± .XX ± X/64 ± 1/64 ∠° ± 1°

TITLE: SCHEMATIC - CRT BOARD (SMOOTHING)

SIZE D | DRAWING NO. 03 004-6466 | REV | SCALE | SHEET 4 OF 4

LTR	ECO NO.	CHANGED BY	APPV'D BY	DATE
A	RELEASE			4/18/77
B	834	Paul 9/77		9/14/77
C	863	12-28-77		1/29/77
D	938	T.H. 7/26/78		





SHEET 2 IS "A" SIZE L/M

ASSEMBLY NOTE

WHEN INSTALLING THIS ASSY IN SYSTEM,
A 6" PIECE OF URETHANE TAPE (PT. NO. 377-0201) IS
TO BE ATTACHED TO TOP TRIM TO PREVENT SHORTING.

DRAWN BY: Paul	DATE 9/8/77	
CHECKED BY:		
ENG APPVL.	9/14/77	
MFG APPVL.	9/14/77	

UNLESS OTHERWISE SPECIFIED
ALL DIMENSIONS ARE IN
INCHES AFTER FINISHING
AND TOLERANCES ARE:

.XXX ±
.XX ±
X/X ± 1/64
∠° ± 1°

WAVETEK
Wavetek Scientific, Inc.
10 Volvo Drive
Rockleigh, NJ 07647

TITLE
ASSEMBLY
GRATICULE LAMP P.C.B.

SIZE	DRAWING NO.	REV
B	02 004-6468	D

SCALE 1/1 SHEET 1 OF 2

SIZE B | DWG NO B | REV

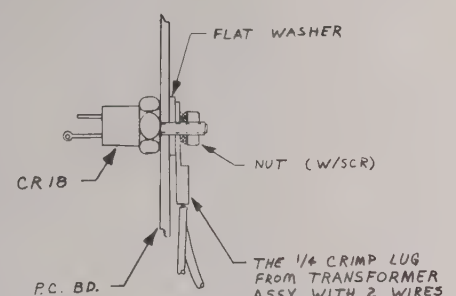
WAVETEK®

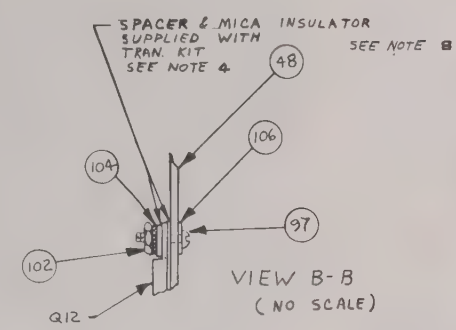
TITLE	LIST OF MATERIAL	REV
ASSEMBLY GRATICULE LAMP P.C.B.	02 004-6468	D

RELEASE AUTHORITY	CHK BY	ENG	MFG	ASSY SIZE	DATE	SHEET
				B	4/18/77	2 OF 2

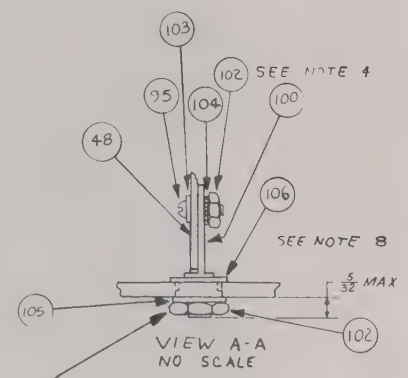
	PART NO	QTY	DESCRIPTION	REMARKS
1	378-1704	13"	WIRE: #24 AWG STR BLACK	
2				
3	378-1724	8"	WIRE: #24 AWG STR RED	
4				
5	05-371-2950	1	LIGHT PIPE - CRT	
6				
7	01-320-6468	1	GRATICULE LAMP P.C.B.	
8				
9	353-0106	2	CRIMP FEMALE	
10				
11	171-1507	3	T-1 TYPE, LAMP, INCAND, 5V, 115MA	GE LAMP NUMBER - 715AS-10
12				
13				
14				
15				
16				
17				
18				
19				
20				
21				
22				
23				
24				
25				
26				
27				
28				
29				
30				
31				
32				
33				

LTR	ECO NO.	CHANGED BY	APPV'D BY	DATE
A	RELEASE			6/21/77
B	862	Paul 10/77		10/77
C	R89	1-19-78		1-78
D	935			
E	964	M McMINN		7-7-78
F	1094	EAC		



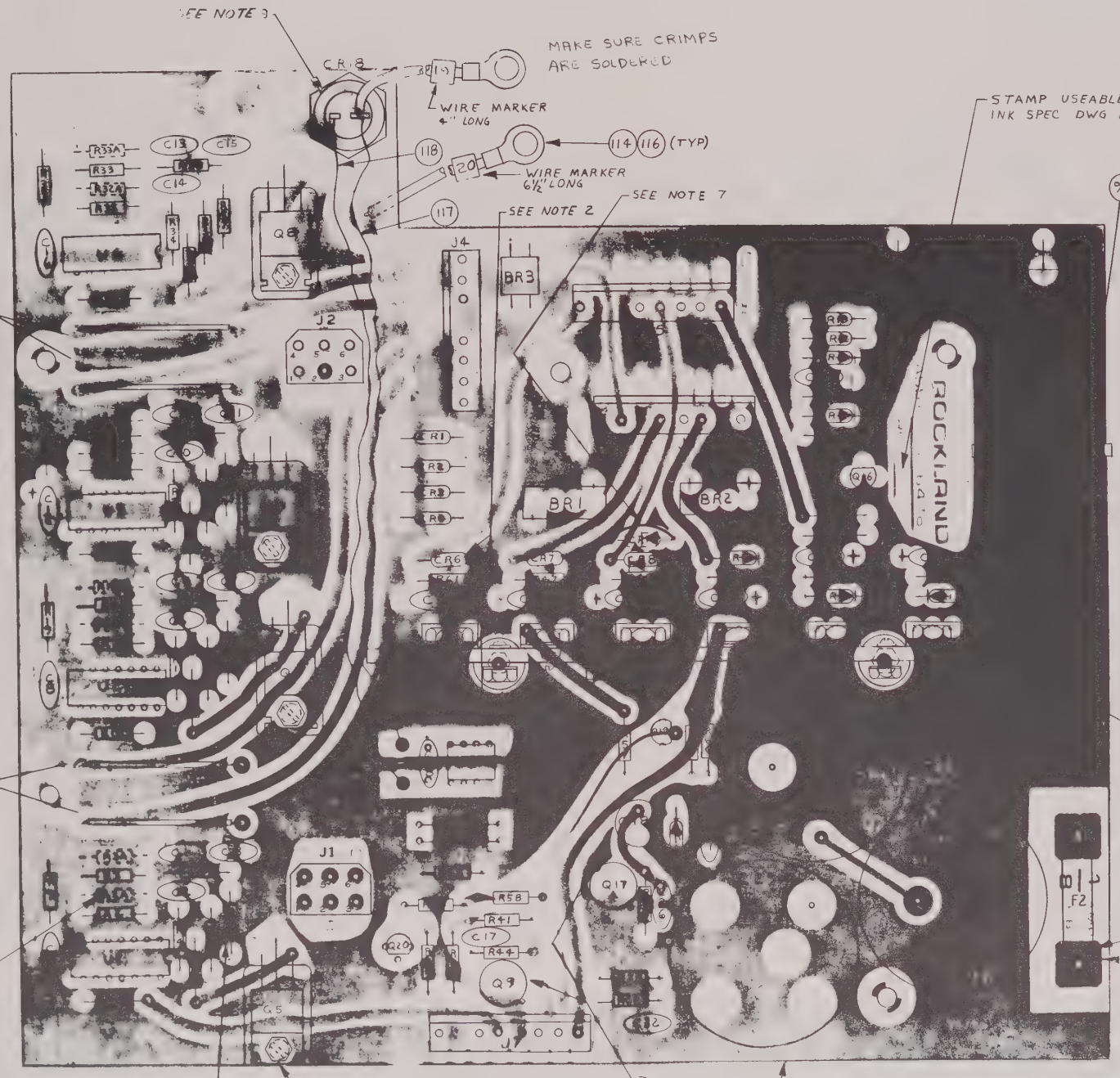


VIEW B-B
(NO SCALE)



VIEW A-A
NO SCALE

USE LOCKTITE
DO NOT OVER TIGHTEN NUT (ITEM 102) OR SPADE BOLT (ITEM 100) WILL DEFORM THE NYLON WASHER (ITEM 106)
SEE NOTE 5



NOTES:

1. MAXIMUM PROTRUSION OF MOUNTING HARDWARE (WITH THE EXCEPTION OF CR18) ON THE SOLDER SIDE OF THE BOARD TO BE 5/32 OF AN INCH.
2. Q10, C19, R61 AND CR6, DO NOT USE (FOR OPTIONS)
3. HARDWIRE, WITH 22 GA. WIRE, THE 2 LEADS OF CR18 TO THE "G" AND "C" CONNECTORS AS SHOWN.
4. APPLY HEAT SINK COMPOUND UNDER Q5, Q6, Q7 Q8, Q11, Q12, Q13, Q14, Q15
5. R2A, R3A, R12A, R13A, R22A, R23A, R32A, AND R33A ARE TO BE SELECTED AS TRIMMING RESISTORS FOR 5 VOLT OUTPUT
6. R7, R17, R27, AND R37 TO BE SELECTED FOR 7.2 AMP CURRENT LIMIT
7. CR17 TO BE ADDED FOR OUTPUT VOLTAGE BOOST IF NEEDED, (HARD WIRE FIRST) 1½" INSULATED
8. INSERT 20AWG. BLACK WIRE AS SHOWN (4) PLACES
9. SOLDER FUSE CLIPS TOP & BOTTOM - SOLDER TOP TO RIVET ONLY

SHEETS 2, 3, 4 AND 5 ARE "A" SIZE L/M

DRAWN BY	TH	DATE 4-1-77
CHECKED BY		
ENG APPVL		
MFG APPVL		

UNLESS OTHERWISE SPECIFIED ALL DIMENSIONS ARE IN INCHES AFTER FINISHING AND TOLERANCES ARE
.XXX ±
.XX ±
X/x ± 1/64
∠° ± 1°

WAVETEK
Wavetek Scientific, Inc
10 Volvo Drive
Rockleigh, NJ 07647

TITLE ASSEMBLY POWER SUPPLY P.C.B.

SIZE D | DRAWING NO 02 004-6476 | REV F

SCALE 2/1 | SHEET 1 OF 5

88

WAVETEK®

TITLE	LIST OF MATERIAL	REV
ASSEMBLY, POWER SUPPLY P.C.B	02 004-6476	F

RELEASE AUTHORITY	CHK BY	ENG	MFG	ASSY SIZE	DATE	SHEET
				D		2 OF 5

ITEM	PART NO	QTY	DESCRIPTION	REMARKS
1	01-320-6476	1	BOARD, P.C.	
2				
3				
4				
5				
6	00-109-8300	3	C: FXD ELECT 3000Uf 50V	C28, C29, C30
7	00-109-7250	1	C: FXD ELECT 210Uf / 250V	C27
8	00-109-6101	1	C: FXD TANT. 10Uf 20% 50V	C25
9	00-109-6100	5	C: FXD TANT 10Uf 20% 20V	C18, C20, C21 C22, C23
10	00-109-6680	5	C: FXD TANT 68Uf 20% 6V	C4, C8 C12, C16, C24
11	00-109-5100	4	C: FXD TANT 1Uf 20% 35V	C1, C5, C9, C13
12	00-100-4102	5	C: FXD CER .1Uf ±20% 50V	C3, C7, C11, C15, C17
13	00-100-3103	3	C: FXD CER 0.01Uf+ 500V	C26, C31, C32
14	00-100-2100	4	C: FXD CER 1000Pf +80-20% 1KV	C2, C6, C10, C14
15				
16				
17				
18				
19	00-130-1440	2	CR: SIL FWB 100PIV 5A	BR1, BR2
20	00-130-3140	1	CR: SIL FWB 400PIV 1A	BR3 MOTOROLA # MDA-920-6
21	00-130-0110	4	CR: SIL RECT 50PIV 1A (IN4001)	CR7, CR8, CR9, CR10
22	00-132-0457 }	5	CR: SIL LWLK 70PIV 200MW	CR1, CR2, CR3, CR4, CR16
23	00-132-0457 }	1	CR: SIL LWLK 70PIV 200MW	CR17 (SELECT AT TEST IF NEEDED)
24	00-132-0277	3	CR: GER 120PIV 100MA (IN277)	CR12, CR13, CR14
25	00-139-0002	1	Q: SIL SCR 65A (C147)	CR18 W/MTG KIT, NO MICA OR TEFLON WASHERS
26				
27	00-131-9510	1	CR: SIL ZR 5.1V 10% 400MW	CR11
28	00-131-0220	1	CR: SIL ZR 22V 10% 400MW	CR15
29				
30				
31				
32	00-120-0370	4	U: P.V. RG 2.0-37V DIP (U723)	U1, U2, U3, U4
33	120-9423	1	U: OVERVOLT PROT CKT MC3423P1	U5 MOTOROLA

WAVETEK

TITLE: ASSEMBLY, POWER SUPPLY P.C.B

LIST OF MATERIAL: 02 004-6476

REV: F

RELEASE AUTHORITY | CHK BY | ENG | MFG | ASSY SIZE: D | DATE | SHEET 3 OF 5

ITEM	PART NO	QTY	DESCRIPTION	REMARKS
34				
35				
36	00-139-3003	1	2N5061 SCR 60V, 8 AMPS	Q20 MOTOROLA
37	00-120-0052	1	Q: P.V. REG 5V 5% 1A 7805	Q15
38	00-120-0120	1	Q: P.V. REG 12V 1A 7812	Q12
39	00-120-0151	1	Q: P.V. REG 15V 5% 7815	Q11
40	00-120-0121	1	Q: N.V REG 12V 7912	Q14
41	00-120-0155	1	Q N.V REG 15V LM 320-15	Q13
42	00-134-6290	4	Q: SIL NPN (2N6290)	Q5, Q6, Q7, Q8
43				
44	00-134-4409	1	Q: SIL NPN (2N4409)	Q16
45	00-135-6521	1	Q: SIL NPN (MPS6521)	Q19
46	00-135-3003	1	Q: SIL NPN (MM 3003)	Q18 MOTOROLA
47	00-137-4003	2	Q: SIL PNP (MM 4003)	Q17, Q9 MOTOROLA
48	05-367-0408	2	HEAT SINK	
49	00-376-2104	3	SPREADER TXSTR LEAD NYL	USE ON ITEMS 46 & 47
50				
51				
52				
53	111-3000	2	R: FX MFLM 3.00K 1% 1/8W	R42, R43
54				
55				
56	116-3304	1	R: FX COMP 30K 5% 2W	R64
57	00-111-2000	4	R: FX MFLM 2.00K 1% 1/8W	R2, R12, R22, R32
58	00-111-4990	4	R: FX MFLM 4.99K 1% 1/8W	R3, R13, R23, R33
59	00-112-1500	1	R: FX MFLM 15.0K 1% 1/8W	R60
60	00-113-1270	1	R: FX MFLM 127K 1% 1/8W	R58
61				
62	116-9102	1	R: FX COMP 1.0Ω, 5% 1/2W	R63
63	00-116-1151	4	R: FX COMP 150Ω, 5% 1/4W	R9, R19, R29, R39
64	00-116-1181	1	R: FX COMP 180Ω,	R51
65	00-116-1201	4	R: FX COMP 200Ω,	R1, R11, R21, R31
66	00-116-1301	4	R: FX COMP 300Ω, 5% 1/4W	R8, R18, R28, R38

WAVETEK®

TITLE	LIST OF MATERIAL	REV
ASSEMBLY POWER SUPPLY P.C.B	02 004-6476	F

RELEASE AUTHORITY	CHK BY	ENG	MFG	ASSY SIZE	DATE	SHEET 4 OF 5
				D		

ITEM	PART NO	QTY	DESCRIPTION	REMARKS
67				
68				
69	00-116-2101	15	R: FX COMP 1K 5% 1/4W	R5, R15, R25, R35, R45, R47, R48, R49 R50, R52, R53, R54, R55, R62, R65
70				
71	00-116-2131	4	R: FX COMP 1.3K 5% 1/4W	R6, R16, R26, R36
72	00-116-2151	1	R: FX COMP 1.5K 5% 1/4W	R66
73	00-116-2301	4	R: FX COMP 3K 5% 1/4W	R4, R14, R24, R34
74	00-116-2681	1	R: FX COMP 6.8K 5% 1/4W	R59
75	00-116-2471	1	R: FX COMP 4.7K 5% 1/4W	R57
76	00-116-3471	1	R: FX COMP 47K 5% 1/4W	R56
77				
78	116-0561	1	R: FX COMP 56Ω 5% 1/4W	R41
79	116-1101	1	R: FX COMP 100Ω 5% 1/4W	R44
80	116-3121	1	R: FX COMP 12K 5% 1/4W	R46
81				
82				
83	00-165-4006	1	FUSE 3AG 1/8A FB (TYPE AGC)	F2
84	00-362-2005	2	CLIP FUSE MTG	
85	00-389-8000	2	EYELET .121 D x .125 L	
86				
87				
88				
89				
90				
91				
92				
93				
94	00-380-6042	4	M: SCR ST CD SL 6-32 x 1/4 PH	
95	00-380-6061	2	M: SCR ST CD SL 6-32 x 3/8 PH	
96	00-377-4001	2	TIE: CABLE NY NAT	
97	00-380-6081	5	M: SCR CD SL 6-32 x 1/2	
98				
99				

WAVETEK®

TITLE ASSEMBLY. POWER SUPPLY P.C.B.

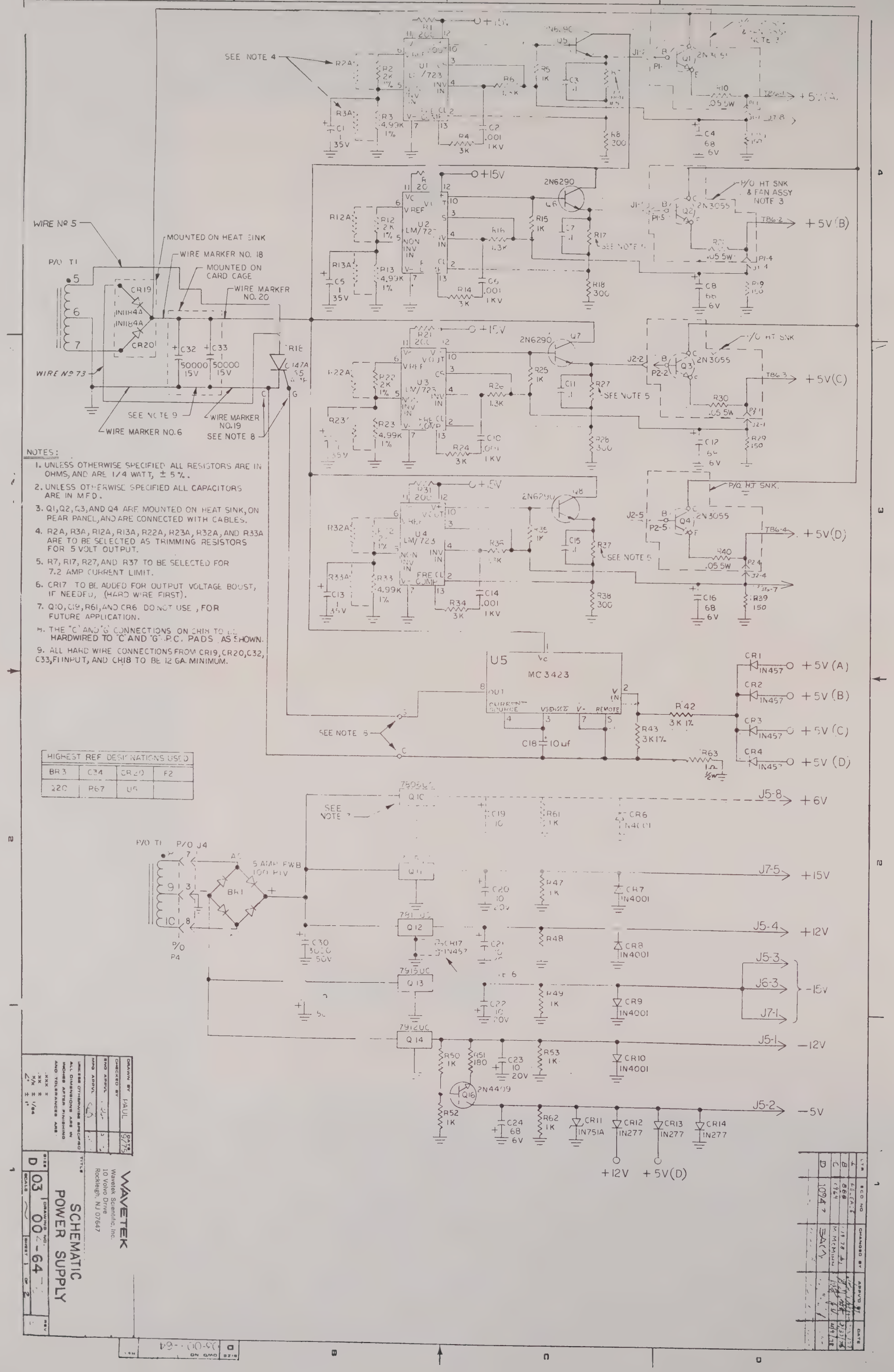
LIST OF MATERIAL 02 004-6476

REV F

RELEASE AUTHORITY	CHK BY	ENG	MFG	ASSY SIZE D	DATE	SHEET 5 OF 5

ITEM	PART NO	QTY	DESCRIPTION	REMARKS
100	00-389-9002	2	SPADE BOLT ST CD 6-32x1/4 THD.	
101	00-368-5004	9	INSULATOR: MICA TO-220	
102	00-387-6080	13	NUT: HX ST CD 6-32 x 1/4 AF	
103	00-388-0060	2	WASHER FLT ST CD #6	
104	00-388-1061	11	WASHER EXT LK ST CD #6	
105	00-388-3080	2	WASHER FLT NYLON #8	
106	00-388-4060	7	WASHER PILOT NYLON #6	
107				
108				
109				
110				
111	00-354-0015	2	CONN HEADER 6 POS (MOLEX)	J1, J2
112	00-354-0016	4	CONN TERM 8 POS (MOLEX)	J4, J5, J6, J7
113				
114	00-359-0010	2	LUG CRIMP #10 RING 12AWG	
115				
116	00-378-1120	12"	WIRE #12 AWG STR. BLK VNL	
117	00-378-1605	7"	WIRE #22 AWG BON BLK	
118	00-378-1625	8 1/2	WIRE #22 AWG BON RED	
119	00 378-1504	7"	WIRE: #20 AWG STR BLK	
120	00-524-5000	A/R	HEAT SINK COMPOUND	GC8101
121				
122				
123				
124				
125				
126				
127				
128				
129				
130				
131				
132				

16



NOTES:

1. UNLESS OTHERWISE SPECIFIED ALL RESISTORS ARE IN OHMS, AND ARE 1/4 WATT, ± 5%.
2. UNLESS OTHERWISE SPECIFIED ALL CAPACITORS ARE IN MFD.
3. Q1, Q2, Q3, AND Q4 ARE MOUNTED ON HEAT SINK, ON REAR PANEL, AND ARE CONNECTED WITH CABLES.
4. R2A, R3A, R12A, R13A, R22A, R23A, R32A, AND R33A ARE TO BE SELECTED AS TRIMMING RESISTORS FOR 5 VOLT OUTPUT.
5. R7, R17, R27, AND R37 TO BE SELECTED FOR 7.2 AMP CURRENT LIMIT.
6. CR17 TO BE ADDED FOR OUTPUT VOLTAGE BOOST, IF NEEDED, (HARD WIRE FIRST).
7. Q10, C19, R61, AND CR6 DO NOT USE, FOR FUTURE APPLICATION.
8. THE 'C' AND 'G' CONNECTIONS ON CR1X TO BE HARDWIRED TO 'C' AND 'G' P.C. PADS AS SHOWN.
9. ALL HARD WIRE CONNECTIONS FROM CR19, CR20, C32, C33, F1 INPUT, AND CR18 TO BE 12 GA. MINIMUM.

HIGHEST REF. DESIGNATIONS USED			
BR3	C34	CR20	F2
Q20	R67	U5	

REV	ECO NO	CHANGED BY	APPVD BY	DATE
D	1094	EAK		
C	868	M McMinn		3/31/78
B	1924			4/19/78
A	FE-FA-1			4/19/78

DRAWN BY PAUL DATE 9/75
CHECKED BY
ENG APPVL
MFG APPVL
UNLESS OTHERWISE SPECIFIED ALL DIMENSIONS ARE IN INCHES AFTER FINISHING AND TOLERANCES ARE: .XXX ± .XX ± 1/64 ∠ ± 1°

SIZE D | SCALE | DRAWING NO. 03-0002-64 | SHEET 1 OF 2 | REV

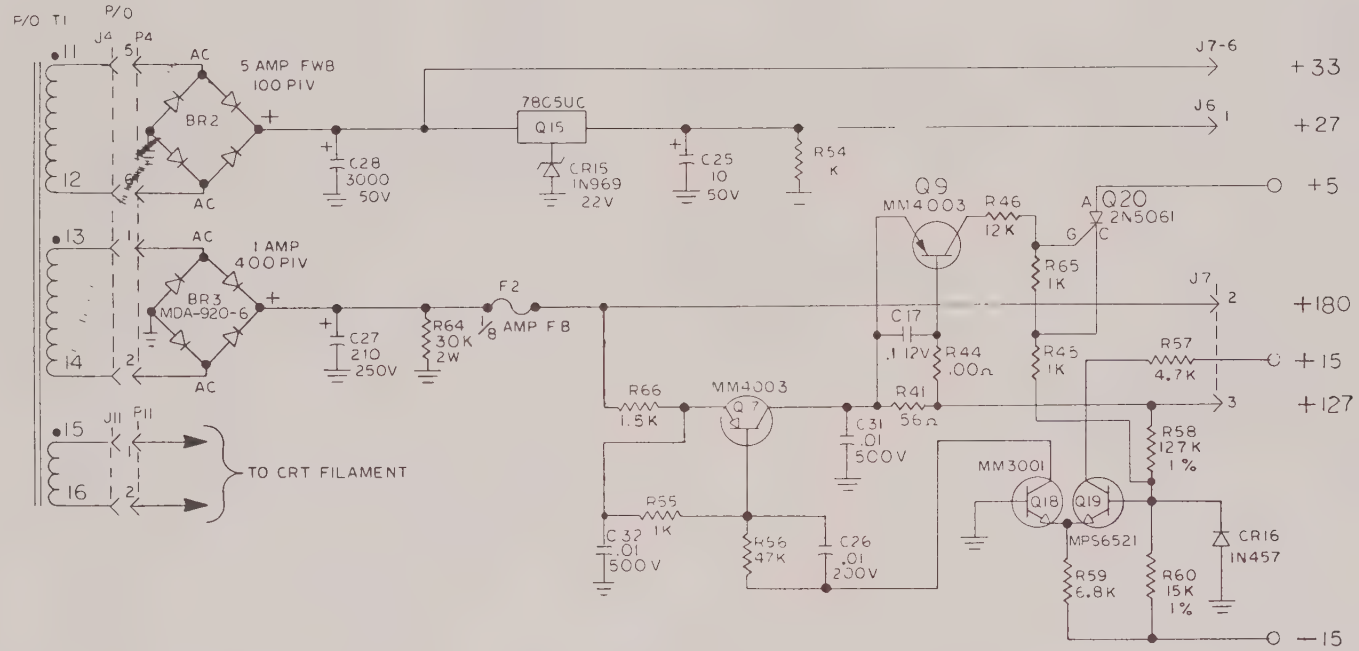
TITLE: SCHEMATIC POWER SUPPLY

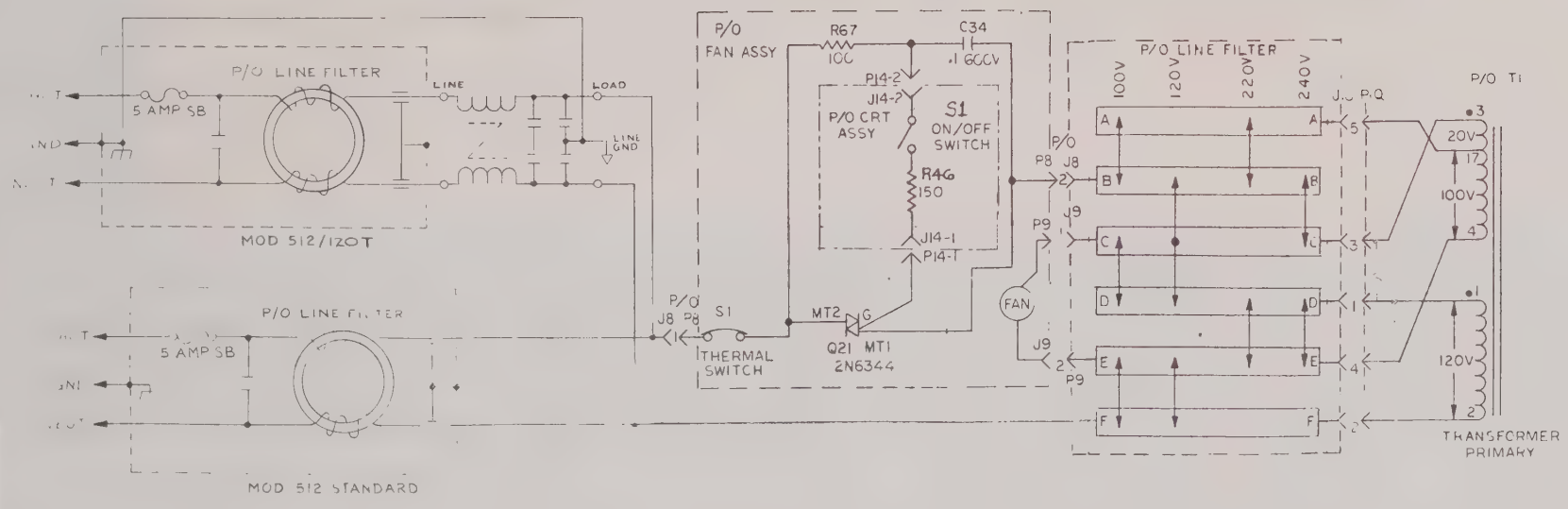
WAVETEK
Wavetek Scientific, Inc.
10 Volvo Drive
Rockleigh, NJ 07647

03-0002-64 D

LTR	ECO NO.	CHANGED BY	APPV'D BY	DATE

SEE SHEET 1 FOR REVISIONS





DRAWN BY	DATE
CHECKED BY	
ENG APPVL	
MFG APPVL	

UNLESS OTHERWISE SPECIFIED ALL DIMENSIONS ARE IN INCHES AFTER FINISHING AND TOLERANCES ARE
.XXX ±
.XX ±
X/x ± 1/64
∠° ± 1°

WAVETEK
Wavetek Scientific, Inc
10 Volvo Drive
Rockleigh, NJ 07647

TITLE
SCHEMATIC
POWER SUPPLY

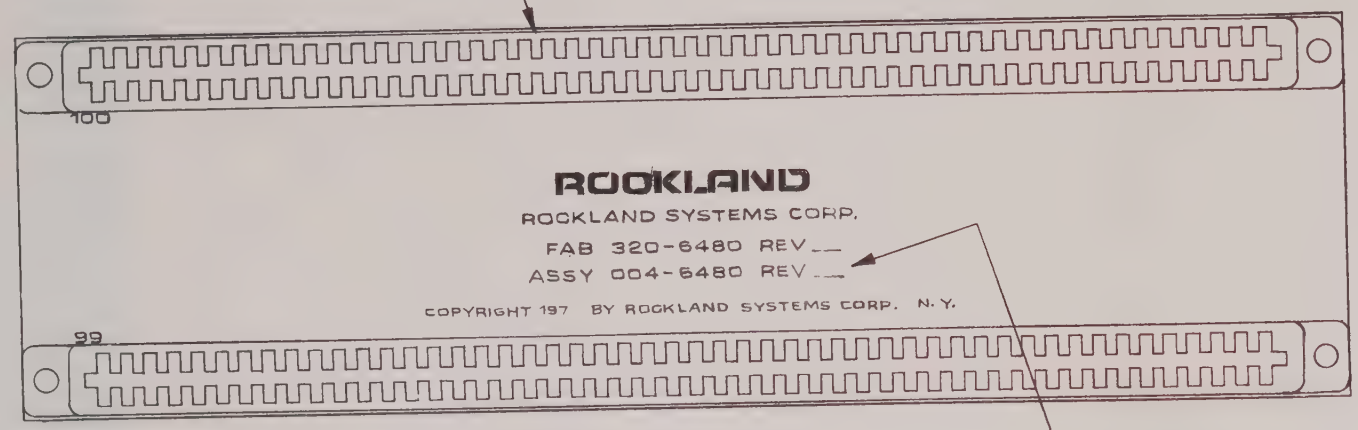
SIZE D | DRAWING NO. 03 00 -64 6 | REV E
SCALE ~ | SHEET 2 OF 2

SIZE D | DWG NO 03-004-64 6 | REV E

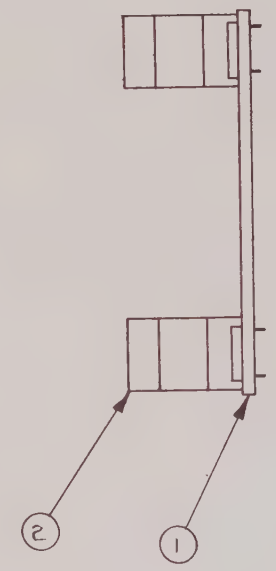
SIZE	DWG NO	REV
C	02-004-6480	B

LTR	ECO NO.	CHANGED BY	APPV'D BY	DATE
A	RELEASED			
B	597	T.H. 7/8/76		7-23-76

ASSEMBLE CONNECTORS THIS SIDE
(AS SHOWN)



STAMP USEABLE REV
LETTER PER INK SPEC
DWG. NO. 00-995-0001



SHEET 2 IS "A" SIZE, L M

DRAWN BY: Paul	DATE 12/75	
CHECKED BY:		
ENG. APPVL.	1/6/76	
MFG APPVL.	1-6-76	

UNLESS OTHERWISE SPECIFIED
ALL DIMENSIONS ARE IN
INCHES AFTER FINISHING
AND TOLERANCES ARE:
.XXX ±
.XX ±
X/x ± 1/64
∠° ± 1°

WAVETEK
Wavetek Scientific, Inc.
10 Volvo Drive
Rockleigh, NJ 07647

TITLE
ASSEMBLY
COUPLER PCB

SIZE	DRAWING NO.	REV
C	02-004-6480	B
	SCALE	SHEET 1 OF 2

WAVETEK®

TITLE: FRONT PANEL COUPER ASSEMBLY

LIST OF MATERIAL: 02 | 004-6480

DEV: B

RELEASE AUTHORITY | CHK BY | ENG MFG | ASSY SIZE: C | DATE: 12-30-75 | SHEET 2 OF 2

ITEM	PART NO	QTY	DESCRIPTION	REMARKS
1	01-320-6480	1	PC: Front Panel Coupler	
2	350-0002	2	100 Contact PC Conn Solder Tail	AMP # 3-530352-3

MP MASTER
MA35758